Wild Nature in Strathearn

D. J. Thomson Gray.

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WILD NATURE IN STRATHEARN.

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THE OTTER.

Wild Nature in Strathearn. . . .

By D. J. THOMSON GRAY, F.Z.S.,

Author of the "*Dogs of Scotland*," &c.

ILLUSTRATED.

"Birds and beasts,
And the mute fish that glances in the stream,
And harmless reptile coiling in the sun,
And gorgeous insect hovering in the air,
The fowl domestic, and the household dog—
. . . . he loved them all."

Crieff:
DAVID PHILIPS.

1902.

"THUS, then, to man the voice of Nature spake—
Go, from the creatures thy instruction take;
Learn from the birds what food the thickets yield;
Learn from the beasts the physic of the field;
The arts of building from the Bee receive;
Learn of the Mole to plough, the Worm to weave;
Learn of the little Nautilus to sail,
Spread the thin oar and catch the driving gale."

—*Pope's Essay on Man.*

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PREFACE.

THIS book was written during a period of enforced retirement from business, subsequent to a severe illness, and was not originally intended for publication, but to while away a weary hour.

Finding much pleasure and rest in noting down some of my communings with Nature, the idea occurred to me that others might enjoy equal pleasure, in comparing their own observations with mine; hence the book.

The treatment may be somewhat unusual; for that I make no excuse, as it suited my whim at the moment, and I did not care to alter it afterwards.

The aim has been to supply, in a popular, and not too

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technical a form, information respecting the Natural History of the central part of Strathearn, and further to stimulate the young to take an interest in, and to study the habits of, the birds and beasts which surround them—a pursuit that, properly conducted, contributes to a healthy life and a contented mind.

D. J. T. G.

INNERPEFFRAY LODGE,
CRIEFF, N.B., January, 1901.

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INTRODUCTORY.

THE wide and fertile valley known as Strathearn extends from Loch Earn on the west to within two and a quarter miles of Newburgh on the east, in all about forty miles. From the Loch to Comrie, a distance of about six miles, the country is mountain and moorland; from Comrie eastwards the valley broadens out into rich pastures and fertile fields.

The whole Strath is heavily wooded with a variety of timber, firs predominating. In the winter of 1893 a storm of wind swept over the

Strath, laying many a monarch of the forest low, almost stripping the high hill of Turleum, and causing great destruction to the surrounding woods.

Situated between the Ochil and Grampian ranges, on the fringes of which we rest, the district is rich in animal and bird life. Field and marsh, moor and fell, with cultivated land coming close up to the hillside, provide a rich field for the naturalist and plenty of food for the different animals of *ferœ naturœ*. Looking down on the valley from any of the surrounding hills, the landscape with its flowing river, cultivated fields surrounded with hedges and woods, with the rugged mountains in the distance, is a scene of rare beauty, on which the eye rests pleasurably, while the mind feasts on its rich variety.

The northern part of the valley touches the edge of the Grampians, and there the croak of the Corbie and the cry of the Moorfowl may be heard; but the king of the air, the Golden Eagle, is a very rare visitor. The late Dr

Marshall, Crieff, informed me that he saw a Golden Eagle when passing through the Sma' Glen in the winter of 1890, and the same year one was reported to have been seen near Foulford, but it is seldom the Eagle is seen so low down.

The birds resident with us are:—The House Sparrow, Chaffinch, Yellow Hammer; Green, Red, and Heather Linnets; Robin, Wren, Hedge Accentor, Missel Thrush, Mavis, Blackbird, Sky Lark, Wood Lark, Starling (the last noted being exceedingly common of late years), Oxeye, Cole, Blue and Long-Tailed Tits (the latter scarce). Wood Pigeons are numerous, the Stock Doves rare. Rooks are plentiful everywhere, every landed proprietor having a rookery near his house. On the tall old Scotch firs around Innerpeffray Library there is a colony of Rooks that nest and bring forth their young every year. The Library itself is well worth a visit, containing as it does many rare and valuable books of interest to both the antiquarian and bibliophilist; but that *en passant*. Jackdaws which fraternise

with the Rooks are abundant Tawny Owls are well distributed all over the Strath, but many only know of their existence by hearing them hoot at night. The Long-Eared Owl is sparsely distributed, and the Short-Eared Owl is somewhat rare. Woodcocks breed and stay all the year round, but their ranks are considerably added to in winter. Snipe, both common and Jack (the latter in winter), are fairly plentiful; and in summer the Curlew visits us to breed, as do the Sandpiper, Red and Green Shanks, and Oyster Catcher. The Mallard and Teal Ducks are permanent residents, and the Golden Eye, Shelldrake, Little Grebe or Dabchick, Merganser, and Red-Throated Diver visit us in winter; and at rare intervals, when blown in by a storm from the east, the Rotche or Little Auk, and one or two of the different varieties of Duck that haunt the estuary of the Tay in winter. A few years ago a specimen of the Smew was shot in the Earn at Dornock. The Hooded Crow is only

a visitor, so is the little Merlin, but the Sparrow Hawk and Kestrel, while not plentiful, are by no means rare. The Black-Headed Gull is common, and the Herring Gull is with us at different seasons, so is the common Gull; while the Water Hen, Water Dipper, Kingfisher, and Heron we have always. Coots are to be found in the lochs. The Bullfinch, while not abundant, is not rare, and the Goldfinch is found in straggling pairs. The Pied, Grey, and Yellow Wagtails (the latter in summer) may be seen running along the gravelly shores of the burns, or in the pasture fields adjoining the river, and the Lapwings in great plenty careering everywhere.

Our summer migrants are the Wheatear, Cuckoo, Corncrake, Chimney Swallow, House Martin, Sand Martin, Swift, Spotted Flycatcher, Chiff-Chaff, Wood Wren, Willow Wren, Sedge Warbler, Stonechat, Whinchat, Black-Headed Bunting (Coalhood), common White Throat, Marsh Pipit (Heather Cheeper), and common Creeper—these are all well distributed.

The common Bunting, Fieldfare, Golden Plover, Snow Bunting, and Brambling or Monntain Finch are only to be found in autumn and winter.

The rare birds with us are the Jay, Magpie, Red Start, Gold-Crested Wren, Buzzard, Siskin, Green and Great Spotted Woodpecker.

The Water Voles burrow in the banks of the streams, and the Brown Rat is too plentiful in about the farm-steadings. Otters are by no means plentiful, being trapped or shot when seen. This is much to be regretted. Game of all kinds, both fur and feather, abounds—Roe-Deer, Brown Hares (the White Hares only visit us in severe winters), Rabbits, Red Grouse, Black Grouse, Capercailzie, Pheasants, and Partridges. The Squirrel is to be found in all the woods, and Moles in the cultivated fields. Hedgehogs are numerous, but a Badger or a Fox is a rare sight. We have the common Bat; and here I may remark that on the 2nd June, 1900, at noon, the sun shining

brightly in a clear sky, I saw a Bat fluttering over the garden, evidently hawking for flies, and going rather higher than its kind do in the evening. Weasels and Stoats are common, and also the House Mouse and Field Mouse, the common Shrew, Water Shrew, Field Vole, Frog, Toad, and Water Newt. In the river are to be found Salmon, Sea-Trout, Brown Trout, Pike, Perch, Eels, and Minnows.

A MORNING WALK.

"The breezy call of incense breathing morn."—*Gray.*

THERE had been a shower of rain during the night, not sufficient to soak the earth, but just enough to wash the dust off the leaves of the trees, and to make the road comfortable to walk upon. How fresh and cheering everything looks in the cool of early morning. The beech, oak, and birch trees are in their lucious green, a marked contrast to the deep dark green foliage of the Scots firs, with their russet brown, weather-beaten trunks. The horse chestnut is just now adorned with cone-shaped flowers of a pleasing colour, which, however, are very transient.

The snowy, sweet-scented blossoms of the hawthorn—Queen Mary's favourite tree—stand out prominently against the bright, pendulous yellow flowers of the laburnum, and the bloom of the broom and whin, which now decks every bank and brae; while the delicate pink of the wild rose *(Rosa Canina)* is intensified in its setting amongst the wayside flowers by the spotless white of the white dog rose *(Rosa arvènsis)*. The rain-drops on the grass sparkle in the sun like the finest diamonds, and the lea is ablaze with the humble gowan, and the sweet, heavy-smelling white clover, amongst which the bees hum.

Many of the corn fields, as if in keeping with the bloom of the broom and whin, are a sea of yellow, glorious in colour on this summer morn as the sun shines on the bright yellow flowers of the charlock (*sinapis arvènsis*), a troublesome weed, popularly known as "scallies" or "skellock," and also as wild mustard, which, when once established in cultivated fields, is

almost impossible to eradicate, the oily seeds, which are shed before the corn is ripe, lying dormant below the surface for years, and only coming into life when turned up by the plough to receive the heat of the sun and the influence of the air. Spraying the plants at a certain stage with a weak solution of sulphate of copper is said to destroy them, and not to injure the corn among which they grow, but this plan of getting rid of the pest has not been generally adopted. Another troublesome weed to the farmer, also bearing yellow flowers, is the sow thistle *(sonchus oleraceus)*, very plentiful this season amongst the rye-grass for hay-making. I notice it in almost every hay-field, and on all kinds of soil.

> "Go, child of nature, range the fields,
> Taste all the joys that spring can give;
> Partake what bounteous summer yields,
> And live whilst yet 'tis thine to live."

Birds are everywhere in the fields and on the trees collecting food for their young. After

the rain Starlings, Thrushes, and Blackbirds have no difficulty in finding worms, which they quickly pull out of the earth, peck all over, and, gathering them in a bunch in their bills, fly off to their nest.

What a noise a nestful of young Starlings can make when the old one approaches with food. In a dove-cot close to my bed-room window there is a nest of young Starlings. As soon as daylight comes in they begin their cries, and then good-bye to sleep.

On the trees the smaller birds are busy hunting for insects. Here is the Blue Tit, flitting from branch to branch, hanging from a twig body downwards, peering into every cranny, and always on the move. We can hear his well-known "chee-chee" when we cannot see him. The Wood Warbler is not far off, lilting his sweet little song as he flits to and fro, now and again leaving the trees to catch a fly on the wing, and this interests us, as it is not the dart of the Swallow, but more of a flicker and

STARLING.

hover, as if the insects he tries to catch were suspended in the air and not moving.

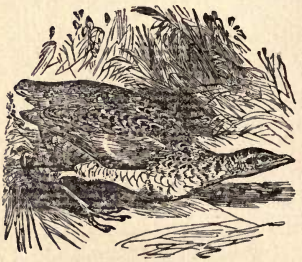
"The sporting white throat on some twig's end borne,
Pours hymns to freedom and the rising morn."

A Cushat with rapid and strong beat of wings passes over our heads, flying rapidly in a straight line to get its morning meal, perhaps a mile or two away. There is a flock of young Rooks "caw-cawing" amongst the trees, which disturbs the morning's peace. They have evidently left the paternal nest to be nearer the feeding grounds, and so relieve the old birds of the trouble of making long journeys. This morning I wish them elsewhere.

"But who the melodies of morn can tell:
The wild brook bubbling down the mountains,
The lowing herd,
The hum of bees, and linnet lay of love,
And the full choir that wakes the universal grove."

The Pheasants are out feeding in the fields, and the cheery matin song of the Lark fills the odorous air as the mist leaves the top of Turleum; while the Rabbits, old and young, in

countless numbers, scurry into the woods as we approach. We can just discern the black ear tips of a Hare as she nibbles the blades of corn, which is now long enough to hide her body. The Pee-Weeps are making a great noise, and flying round the shepherd's dog, who is having a quiet hunt on his own account amongst the rye-grass that will soon be made into hay. He disturbs a Landrail, which, flying a short distance with legs hanging down, drops and runs. In a few seconds we hear his "crek-crek" at the other end of the field, but as the bird is a bit of a ventriloquist, he may not be so far away, or it may be another bird calling. The Corncrake, if chased until forced to fly, and again and again put up, will run into the bottom of a hedge, or



CORNCRAKE.

other cover, and hide his head, ostrich-like, leaving his body exposed. When a boy I repeatedly caught these birds after a long chase, and always found them in the position described.

On the bank of the burn a Water-Vole is busy washing his face, brushing his moustache, and preparing himself generally as if he were to start on a courting expedition. He has not yet seen us, but the Moor-Hen with her little brood has, and she is anxious to get them out of sight and under the cover of the opposite bank. This familiar bird never leaves us, but it is only in very severe winters that it will become so tame as feed with the poultry. A motion in the grass attracts our attention. It is a Partridge stealing swiftly away. How quickly a Partridge can disappear when she gets under cover, and a winged one amongst turnips will sometimes baffle the best retriever to catch her. The young run when hatched, and are the most beautiful little things one can see in nature. The various colours of their downy covering are

so finely blended, and so rich in their subdued colours that one could wish they would remain so.

A white vapour begins to rise from the damp earth, proclaiming that the sun has risen, the glories of which we have missed this morning, being too intent on the things of the earth. Each day has some new beauty to the observant eye, and the heavens more than the earth show change, not two days being alike. There is much to be seen in the quiet of the morning when all animal and bird life is astir, more especially in the late spring and early summer, when the air smells sweet. The birds sing their cheery love-songs, and the scent of the new-mown hay floats on the breeze. We linger on, feasting on the beauties around us.

> "The meanest floweret of the vale,
> The simplest note that swells the gale,
> The common sun, the air, the skies,
> To him are opening paradise."

When we left the house we purposely left the dogs, so that we could see without disturbing the different animals we came across. But what

do we see? The old bitch busy unearthing a nest of young Rabbits in a field of oats. She must have got out and followed our footsteps. What a remarkably strong and fine scent a dog has got that he can follow one's footsteps, often after a considerable time has elapsed. One would think the smell left by a boot must be infinitely small, and that every leather boot would smell much the same, but I have never seen a dog err in this.

I have noticed my old bitch and others of my dogs, when they lost me, go back to the place where they last saw me, and find me out by following on my scent. One in particular, a white Scottish terrier, named Bob (which I gave to the Earl of Suffolk, two years ago, when he was north salmon fishing), was remarkably good at following a human scent—too much so, for I often found him on my track when his company was not wanted.

The instinct of the Rabbit in covering up the mouth of the hole containing her young,

when she goes out to feed, so that prowling enemies may not get them, is also natural to the Wild Duck, which covers the eggs in her nest with dead leaves, grass, &c., when she goes in search of food. My old terrier knows—I suppose by smell, as do also foxes—that there are young rabbits below, and very quickly scrapes them out, not to eat them, but simply for the pleasure of killing them. She is like the Highland keeper's dog, which was so "full o' sariousness, that he could never get eneuch o' fechtin'"; only, in her case, it is worrying vermin.

I can see by the upturned excrement of the cattle that a Hedgehog has been furrowing for beetles, slugs, and insects, shortly since, but as he is a night feeder, he had gone to his lair in the wood before our arrival, otherwise the terrier would have found him. Hedgehogs have the power of rolling themselves up into a ball with the spines standing erect. In this state they are safe from the attack of most dogs, but a

game terrier will quickly shake them out of their leathery skin of bristles, and I believe a hungry fox will also attack and eat them. In the summer evenings I often come across them not far from the wood, hunting for food, and grunting like a pig all the time.

A Ladybird *(coccinella)* has alighted on my coat sleeve. These gorgeous coloured beetles, which children call "soldiers," from the colour of their hard wing cases—a bright scarlet with dark spots on them—are, unlike their black-coated near relatives, of infinite good to farmer and gardener, as they live, both in the larvæ and perfect state, on the aphides that infest plants, and which include some of the most destructive insects known. While I am admiring the beauty of his colouring, he takes wings and flies away, and in doing so displays a set of wings under the elytra.

A Cuckoo flies past, followed, about ten yards behind, by the "Titling" (Meadow Pipit). What attracts the Pipit to this wandering bird we

do not know, but if you shoot a Cuckoo the Pipit flies down beside it, evidently in great distress, and pecks at its head to bring it back to life. I do not remember a year when Cuckoos were so plentiful here. Not a day passes without two or three being heard calling, and often two are to be seen in company. As a rule, the Cuckoo is a solitary bird, and is rarely seen with another. In July, the old birds will be gone, but the young ones will remain until September or October. Query —Why do the old birds leave so soon, and how do the young, which are left to be reared by a foster mother, know to emigrate, and to where?

> "Reasoning at every step he treads,
> Man yet mistakes his way,
> While meaner things, whom instinct leads,
> Are rarely known to stray."
>
> —*Cowper.*

Our walk, although a short one, has been most enjoyable. There is so much to interest, amuse, and instruct. We feel refreshed by the

pure air of this beautiful morning and by the exercise. We have outstayed our limit, and breakfast, for which we are now ready, will be awaiting us. Time flies to him who is actively employed. How different it is with the indolent and careless, who lie long in bed, and find time heavy on their hands. "Haven't time," is the idle man's excuse. It isn't time, but the will that is wanting. So our thoughts run on as we retrace our footsteps, chanting an appropriate verse from the poet Gray—

"At morn the blackcock trims his jetty wing,
'Tis morning prompts the linnet's blithest lay;
All Nature's children feel the matin spring
Of life reviving with reviving day."

ON THE OLD DROVE ROAD.

WHINCHAT.

THE patches of snow on the south slope of the Grampians grow less day by day. The colour of the fields changes from brownish grey to a dark green, and it requires no close observation to see the effects of the warm sun on the hedgerows. The sedges already carry their tassels. The roots of the perennial flowers spring into life, and the green blade shows

above the earth; but over it all the firs give forth a melancholy music as the wind filters through the branches. That soughing, sighing, never-ceasing lament makes one who is over-sensitive "creep" and shiver. Its monotony is bad for the nerves. The high notes are like screeches from the drowning and despairing. Then the shrill shrieks give place to a mournful wail, which dies away in a low soft moan. And again and again is this repeated. No human voice could give utterance to such sounds.

> "We are the voices of the wandering wind
> Which moan for rest, and rest can never find;
> Lo! as the wind is, so is moral life—
> A moan, a sigh, a sob, a storm, a strife."

A Squirrel runs out a branch, with his tail carried in the orthodox fashion over his back; but it is not always thus. When running on the ground he carries it straight out the same as the Fox. He has been in a state of

torpidity all winter. The warmth of the sun has woke him up and brought him out.

> "Drawn from his refuge in some lonely elm,
> That age or injury has hollow'd deep,
> Where, on his bed of wool and matted leaves,
> He has slept the winter, ventures forth
> To frisk a while, and bask in the warm sun."
>
> —*Cowper.*

During the cold months of the year he hibernates. He does not migrate or go south to warmer climes in winter like our summer migrants, nature not adapting him for long travel, although it is said he will use a piece of bark as a boat to cross the stream, using his bushy tail for a sail and rudder. One summer afternoon I watched for some time the movements of a Squirrel as he played around. My presence was unknown to him, and when he approached me in a direct line I stood quite still, and he ran up my leg and right up to my chin, when, growing anxious about my face, I gave a start, and he retraced

his steps hurriedly, ran a few feet up a tree close by, and gazed at me.

The Squirrel is best seen in the autumn when gathering nuts for his winter's provisions. You wonder how the tiny branches bear his weight, and how he knows to an inch how far to proceed along the branch before he springs to another. His leaps are astonishing. "Soon after Squirrels made their first appearance in Nairnshire, I recollect crossing the hill between the Glen of Holme and the streams of the Findhorn. While on the top of the braehill one of the men accompanying me, but a little distance away at the time, was startled by his sheep dog becoming very excited, and barking at 'a queer wee beastie' among the heather. The beastie, to avoid its persecutor, and seeing no other place of refuge in that treeless region, at once made for the man himself, and at one bound gained the crown of his bonnet, to the poor fellow's discomfiture, for he deemed himself assailed by

something that was at least 'uncannie.'" (Knox's "Autumn on the Spey.")

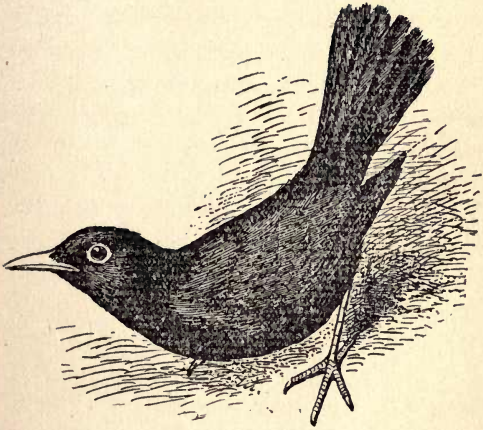
The Lapwings are diving and wheeling over the fallows, where their mates are resting, the Wild Birds Protection Act preventing roving boys from harrying their nests, which are simply holes scooped in the barren earth. By and by the plough and harrow will appear and many eggs will be destroyed. The weird cry of these birds at night as they rise and fall in the air, as if blown hither and thither, the poacher does not like, as it alarms the game and proclaims his approach.

I cannot say—

> "From the neighbouring vale
> The Cuckoo, struggling to the hill-tops,
> Shouteth faint tidings of some gladder place,"

for I have not heard him yet. In 1899 I saw and heard him on 3rd May. It is said to bring good luck to hear the gowk early.

> "Gang and hear the gowk yell,
> Sit and see the swallow flee;
> See the foal before its mither's 'ee,
> 'Twill be a thriving year wi' thee."



BLACKBIRD.

This hot sun would have brought out the Swallows had they been hibernating, as Gilbert White thought some of them did, but not a feather of the family has arrived yet (30th April). The Primroses are now in full bloom, warming the banks and braes with their lovely colour, and pleasing the sense with their delicate perfume. A sharp sting announces the arrival of the Midge. Few but those who have experienced it can imagine what torture this wee demon can inflict. An Admiral Butterfly alights on the walk, but soon flies away and is lost to sight.

The Rooks are busy in the fields; the Blackbirds and Mavis tune their voices, and now that the wind has fallen, in the quiet of the evening we can sit on the grassy bank by the road-side and listen to the bird concert. The Robin sings low and sweet; two Shilfas are fighting in mid-air, while another utters his well-known cry of "Fink, fink," from a tree close by. The Linnets are playing amongst the

broom, waiting the necessary cover for their nests. A Hare hirples across the road, stops to listen, then creeps through the fence, and makes off with all speed to the field of young clover. Only two human beings, of the genus tramp, are to be seen. They are opposite in sex, and to all appearance have been drinking. They are quarrelling. I can hear them a good way off. The sound does not harmonise with those around. The woods, banks, and braes are full of song and story. All there is love. These human intruders are a species of summer migrants—passers. I step off the road and through the gate to avoid them, and disturb a Rabbit at his evening meal. He soon scurries off, his short white tail presenting a fine mark for the sportsman.

Returning to the road, I can picture it in the good old days, before the railway came, the day before Falkirk Tryst or Tarranty Fair, as full of bleating sheep or lowing cattle. Now all is quiet. The only sheep that traverse the old road are

those going and coming to the winterings in the low ground at the fall and spring of the year. The old-fashioned drover and cattle-dealer's occupation is gone. Auction marts have changed all this. We live too fast now for the old methods of locomotion to be of any use. Time is money, is the cry. But nature has not changed. The seasons come as before. Animals, birds, and insects are the same in appearance and habits. The same flowers and grasses grow in the woods and by the road-sides. It is only man that is changeable.

SPRING.

"Gentle spring! in sunshine clad,
Well dost thou thy power display!
For winter makest the light-hearted sad,
And thou,—thou makest the sad heart gay."
—*Longfellow.*

PIED WAGTAIL.

IT is a morning in early spring. The sun is not yet risen, but the warmth of colour in the east proclaims his coming. The air is keen and clear; the palings and hedge are covered with hoar frost, and a nippy, tingling feeling runs through the fingers and makes the nose take on a blaeberry hue.

A Blackbird sings right lustily from yonder spruce tree. Old Sol, red and bleary, mounts into the heavens, and sheds his warmth around. The rime rapidly disappears, and the earth glows, sending forth a warm, moist heat. The Lambs gambol and play on the mound of earth, and the Hares chase each other over the lea. The ploughman whistles a merry tune as he drives on his pair, and in his wake follow a crowd of Sea-maws, Rooks, and Daws, feeding on the upturned worms. A flock of "Cushies" rise from the field of young grasses, where they had been feeding on the succulent clover plants.

A Wheat-Ear not long arrived flies with undulating motion along the roadside, and a Weasel, startled, pops out his head from a "bing" of stones, his white breast showing distinctly against the grey boulders. On the river bank the Water-Hens are chasing each other, and on a willow bush the little perky Wren, with his tail "cockit," sings his sweet

song. A Trout is rising in the stream, probably feeding on flies, although none are to be seen. The Cuckoo is calling from a tree not far away. He is an early arrival this year.

The river bank is strewn with the *debris* of the winter floods. Remnants of dead sheep washed down from the hills, branches of trees, paling "stabs," an old kail-pot, which may be able to tell of "stirring" times, and a lot of etceteras, from which the frugal smith may find something that may "do a turn."

The old boat at the crossing looks leaky. It bears evidence of having seen weather; but the tar and pitch have not been spared upon it, and on a hot summer day it is safer to stand than sit. The noise of the Rooks building in the old fir trees round the abbey is deafening. The war of sticks goes on from early morning to close of day, and nothing is taken "on trust," as the sentries on duty testify.

Tammas's stirks are in the field, but grass

is scarce yet, and they get little but exercise. His winter keep is about done, and the stirks must "fend" for themselves. The snow lies in the glack of Glenturret, and the misty vapour careering along the hill face proclaims hail showers.

The smith is busy in his garden getting in his early potatoes and his dwarf peas. The "wricht" is "doon" with the influenza, and his garden looks cold and dreary with the vegetable remnants of the previous year upon it. A brace of Sparrows are dusting themselves in the March dust, but they fly away as the baker's van approaches. The piping, plaintive noise of the Hedge-Sparrow is now hushed. He is best heard in the morning.

The gardener is covering his wall trees with nets to protect the blossom from frost. The crocus in all his various colours is now full out. The Lark is singing in the lift cheerily. All seems gay and happy now that winter is gone—

"Chill airs and wintry winds! my ear
Has grown familiar with your song;
I hear it in the opening year,—
I listen and it cheers me long."

We linger in the warm sunshine. We miss the darting Swallows, for they have not yet arrived from their African sojourn; but the Thrush proclaims spring in a joyous mood from the top of a high tree. Everything seems bursting into life; the buds and leaves are new and fresh.

"It's spring that moves the unawakened forest,
Clothing with leaves its branches bare and bleak."

The Squirrel, as he runs up the trunks of the trees, is evidence of the spring, for he hibernates. The Yellow Hammer, or "yite," is now in voice, and the pert and familiar "Shilfa" is fraternising with the Sparrows. The Corncrake has not yet arrived. Bullfinches, by no means plentiful, are picking at the buds on the berry bushes. Insect life is still scarce. A solitary humble Bee is all that is to be seen. All animal and vegetable life is on the

move, and everything looks new and fresh. It is the season of love and courtship. Then

"Enjoy the spring of love and youth,
To some good angel leave the rest;
For time will teach thee soon the truth,
There are no birds in last year's nest.

WHEAT-EAR.

SEED-TIME.

"In the wakening spring-time speeding,
What a priest in power is he!
Striding forth—the broad earth seeding,
That her children filled may be."

THE labourer has ceased from the busy labour of the day. He has supped his evening meal, and from his pocket draws forth that soothing companion that never fails him—the pipe. He moves as if by instinct towards his garden. He knows the recent rain has made his heavy land too wet for digging, but he must try it. It won't do. He is simply making plaster of it, and he knows it. Seeds

would never thrive if sown, for the earth would get hard and dry, and without moisture, heat, and air, seeds will not flourish. Nothing for it but wait. Robert Low is busy in his garden—Robert is further up the brae and his land drier—an early garden. He always wins the prizes for onions and carrots; but Sandy with his heavy land beats him every year for leeks and cabbages. Robert's are all run to seed before show day. Robert has no patience; he has a reputation for being first finished, and that he must keep up, whatever the cost. His land being drier, and containing a good proportion of sand, can be wrought at any time without damage; but in the low gardens the land has to be "timed," and it is only by experience that the owner finds out the proper time to dig and sow.

So also is it with the farmer. While the sun shines hot during the day, the frost at night keeps the earth cold and damp. It is only when the drying winds of March and April

come that the earth assumes that light grey colour that the farmer likes to see. If the drains are working properly the soil dries, the air penetrates the soil thus ærating it, and the sun's rays warm the cold earth. All hands are now busy—ploughs and harrows are kept continually going. The seed lying ready, no time is lost in committing it to the ground; but here many err in not studying the right depth to deposit the seed.

As a rule, all small seeds—such as those of grasses—should have the lightest of covering and a fine firm bed on which to lie. Far too often many of these seeds are buried, and have no resurrection, and the seed merchant is blamed for supplying bad seed. The same seed sown by different farmers will show that the fault does not always lie with the seed. In the sowing of the seed of cereals there are many different ways. Using a sowing sheet and two hands is perhaps the most common way, but many use machines—broadcast and drills—

and in this way make a saving in seed. Those who approve of the drill machine say that the seed is deposited all at one depth, so that there is an equal briard and equal ripening. But the price of these machines is still far too dear for the ordinary farmer, who has only use for them a day or two per annum. The seed deposited, and well harrowed and rolled, the farmer's troubles do not end.

While the cottager is worrying about his prize carrots being devoured by the carrot worm, his cabbages club rooting, and his onions attacked by fly, the farmer has a whole army of birds, from the Black Rook and "Cushie Doo" down to the pestiferous Sparrow. Then comes the grub and wire-worm, the turnip fly, and the "drought." Seed-time is one when great expectations are formed. These are very seldom realised. I have always thought that the pursuit of anything worldly always gave more pleasure than possession; but a practical friend, being asked whether pursuit or possession gave

the greater enjoyment, he replied that in the case of his dinner he preferred possession.

The results of the horticulturist and agriculturist depend very much upon the weather, but without good preparation of the soil—that is, working it when in proper season and supplying the land with the proper food for the life of the plant—good results can hardly be expected, for Nature does nothing by chance. Plants like animals have their likes and dislikes in food, and what one variety will flourish on will make another shrivel up and die. For instance, clovers and all plants that have flowers of the butterfly order, such as beans and peas, draw their supply of nitrogen from the air. Such plants will not thrive with an extra supply of nitrogen in the soil; hence, where nitrate of soda is used to get a crop of hay, it is the ryegrasses that flourish, the clovers always suffering from the application. On the other hand, all cereal and root crops benefit by the application of nitrogen to the soil; but here it must

be used with caution, or there will be big, rank straw, "fosey" turnips, and watery potatoes if used in excess of the plants' wants.

After seeding, the briard is carefully watched, and the crop's progress towards maturity duly noted day by day. As harvest approaches, the barometer is carefully consulted, and all weather signs studied; but the elements are in higher hands, and if the farmer has made good preparation, he may rest content.

Of honest work, the hairst will come anon
When he will reap in sheaves what he in grains hast sown.

MERRY MAY.

"Ye'll be bonnie the hale year through
Gin ye wash yer face wi' sweet May dew."

AY dew is supposed to have the virtue of preserving the skin from wrinkles, and it is also said to be a preventative against freckles. Whether it is like somebody's soap —keeps off chaps, is not chronicled, but we know for a fact that very few marriages take place in May, it being considered unlucky to marry in May, although I have no doubt there are those of certain years who would take all risks if an opportunity were given them. The first of May is, or rather was, a day of rejoicing in many countries. The Maypole is now a thing of the past, and the only relic left of the old Roman custom is the gathering of dew

on the first of May, but in our northern isle it is more likely to be rime than dew.

May is a sunny month, but a most uncertain and treacherous one. One day it will be like an Indian summer with a S.S.-W. breeze blowing; next day it may be a regular N.N.-easter, with Arctic cold chilling one to the bone, and reminding one of winter. Frosty nights are common, and do much damage to the fruit blossom; but for all her fickleness the temperature of May rises as the sun mounts high in the heavens; the bare trees put on their leafy coverings;

> "Its genial call dead nature hears,
> And in her glory reappears."

And as evidence that summer is near, the Swallows and other spring migrants appear.

> "Upon a bright and balmy day,
> The flowers around were springing;
> With hymns of love the birds so gay
> Set all the wood a-ringing.
> The trouts did leap, the birds did low,
> The merry lambs were playing,
> And in the hawthorn dell below
> A lassie fair was maying."

May is not a summer month. If we consult the calendar we find summer is nearly two months away, so that the old Scots proverb—"Ne'er cast a cloot till May be oot," aptly applies to "the cauld calends o' May," and those ailing in body will do well not to forget the proverb, but keep on their winter "duds" until May is gone. "In May, 'the month of love,' the year is more confirmed, and every garden, orchard, and copse rivals the singing tree of the Arabian story. Now it is that the full power of song is developed. Witness the clear mellow pipe of that Blackbird perched on the tallest Acacia in the garden, while his mate, with half-shut eyes and pressing her little ones to her bosom, listens in security on her nest in yonder hawthorn hedge spangled with its dewy Mayflower blossoms." That the temperature has risen we see in the army of insects and flies which have sprung into life to feed the birds that have come over the seas to pass the summer with us. The first to arrive is the Sand-Martin

(Hirundo Riparia), after which follow the Chimney Swallow *(Hirundo Rustica)*, then the House Martin *(Hirundo Urbica)*, and last of all of the Hirundinidœ family, the Swift *(Cypselus murarius)*, which, strange to say, is the first to leave us in the autumn, only rearing one brood, the others bringing up two or three before they depart.

> "So when the earth smiles with summer's ray,
> The wanton Swallows o'er the valley play;
> In sport each other they so swiftly chase,
> Sweeping with easy wings the meadow's face,
> They seem upon the ground to fly a race."
>
> —*Blackmore.*

The difference between the Chimney Swallow and House Martin *(Hirundo Urbica)* is to the ordinary observer not apparent, both being looked upon as the same bird, and termed Swallows. The Chimney Swallow has a rich chestnut colour on the forehead and throat, the under parts being of a washy red colour; whereas the Martin has not the chestnut colour, while the breast, rump, and under parts are

white. The Swallow may also be distinguished by its long, narrow, forked tail. The Swallow builds its nest in barns, stables, and outhouses, placing the structure against a couple near the roof, whereas the Martins build below the eaves of houses, where the Swift will also accommodate himself if he can find a hole to hold his eggs, for he is no nest-builder. He is a bird of the air, being on the wing all day, and only resting in the late gloaming for a short repose. All the family feed and drink on the wing. The Swift has very short legs, and if he comes to level ground, he cannot rise, owing to the length of his wings, but flutters along like a duck out of breath, and is easily caught. The claws, four in number, all point forward, and are made to hold a good grip.

Swallows feed on flies and beetles, and are credited with taking hive bees, but only drones, not the workers. The Sand-Martin builds in holes, made with its beak in the face of sandy or chalky precipitous cliffs. The hole is two

feet or more long, and at the end the nest is placed. These birds are very gregarious, and are often found in vast flocks. About the same time arrives the Cuckoo or Gowk ("a creature who has but one idea, and is always repeating it.")

> "Ye breed o' the gowk,
> Ye have never a sang but ane."

It is only the male bird that utters the well-known cry. One peculiarity of the Cuckoo is the smallness of its egg compared to the size of the bird, the egg in size resembling that of the Robin or Sparrow. What is called the "Cuckoo's spittle," a mass of white frothy matter attached to the stalks of grasses, flowers, &c., has nothing to do with the Cuckoo. These frothy lumps are the secretion from the body of a little green insect, to protect it from heat while it sucks the plant until it is full grown, when it changes to a pupa, and from this emerges the perfect insect, the Froghopper, called by Linnæus *Cicada Spumaria.*

Then comes the beautiful army of warblers

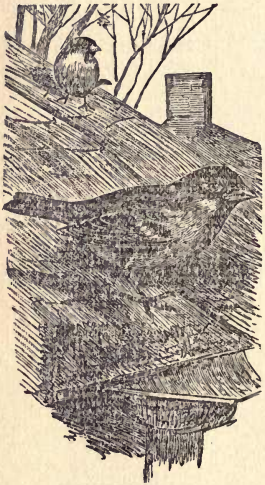
and fly-catchers that enchant us with their delightful music; and soon we have the familiar Landrail or Corncraik. All these arrive in May, and are insect and fly eaters.

Did it ever occur to those who see the Swallow skimming the surface of the water, the Swift wheeling high in the air with his screeching noise, the little warbler that flits in the bushes, or the Tree-Creeper, who, spiral fashion, goes round tree by tree carefully, what kind of life we would lead without these birds? The myriads of insects they destroy would, if left unmolested, constitute a plague. We can have little idea of the number of noxious insects cleared from the air by these birds alone.

The instinct of the migrants in returning year by year to their former abode is wonderful. Jeremiah tells us—"The crane and the swallow observe the time of their coming," so that the habits and migrations of the Swallow were known to the inspired writers. Reason errs, instinct never. The insect-eating birds never appear

here before there is food to keep them alive. The warblers and fly-catchers haunt the woods and water sides. The Swallow likes to be near men and water, and to sit on the house top and twitter (it can hardly be called a song) to the early morn. At this season of the year all bird life is gay—it's their honeymoon—it is the merry month with them.

IDLE MOMENTS.



HOUSE SPARROW.

FOR the time of year the day was warm, and the soft south-western wind had a soothing effect as it played upon our cheeks. I had picked up Graham's book, "Is Natural Selection the Creator of Species?" and had adjourned to the summer-house in the garden. I was just beginning to get interested in the argument when the passing shadow of a cock sparrow, struggling with a long straw in the breeze,

attracted my attention. The wind was almost fit to master the little fellow, but he succeeded in carrying aloft his building material to the eave of the house. From where I sat I could see the unsightly bunch of straw, yarn, worsted, and other domestic material the newly-married pair had gathered together with most industrious care.

How diligently they worked—every stray feather was secured, and any bit of rag lying about was carried to the rapidly increasing structure. Not so many days ago I had seen the same cock sparrow quarrelling and fighting for his mate. His rival and he met in mid-air, screaming, dashing, and tearing each other, and the fight was continued so fiercely after reaching the ground that I was able to pick up one of the combatants. In the sparrow's courting days battles are of hourly occurrence. All bird life is a life of war, simply a struggle for existence, and nature thus selects the best to propagate the species.

The book is now laid aside. The sparrows have awakened sleeping thoughts. There is no bird better known than the House Sparrow *(Passer Domesticus)*, not only in our own land, but over the whole world—in Africa's sunny clime, in the crumbling temples of the Holy Land, and in every spot where man is found. He steals from the food put down to the poultry. He is not above entering the pig's trough, and in the stable, byre, and outhouse you will find him, if he is not picking the heart out of your yellow crocuses, or plucking the buds off your berry bushes. He moves about amongst the carts, barrows, and vehicles in the busiest streets of our large manufacturing towns with a *sang froid* peculiar to his species. He is a most impudent rascal, but makes no pretence to good manners. What I admire him for is his untiring industry.

"Frae house roofs, riggin's, lums, an' trees
They watch for 'grub' without devald;
A' day they're busier far than bees,
Let the day be warm or cauld."

He is so industrious that he would build out all other birds that came near him, and out of pure mischief will often take possession of the neighbouring Martin's nest. He will pop into a hole in the slates, will block up water-spouts, occupy any holes in the eaves with his nest, which is, perhaps, as interesting a sight as the young naturalist could see. The nest is large, and, if unprotected, is covered on the top, the bird entering by a hole at the side, and it is composed of almost everything in the soft goods line. Outside may be found straw, hay, twine, hair, worsted, bits of leather, pieces of paper, rags; and inside, moss, fur and soft feathers of all kinds and colours. It is a most cosy abode, and a marvellous example of "gear" gathering.

Away from the dust and smoke of the town the Sparrow is rather a pretty bird, especially the male; but, as I have said, what I admire most about him is his industry. He never rests. How different the Cuckoo. He builds no

nest; he is too lazy. He looks around and drops his egg into a Hedge Sparrow or Lark's nest, where he finds the process of incubation about to commence, and leaves the rest to chance. He has no maternal instincts. Do we not find many of the same in the human race?—lazy, indolent creatures who have all their lives got everything done for them.

A friend of mine, who was in the happy position of not having to work, while enjoying a sojourn with an industrious, hard-working man who possessed a fruit farm, accosted him one day while he was picking strawberries with the abrupt observation—

"The hand of the diligent maketh rich, John."

"Gad, I dinna ken aboot that," replied John; "I see fouks gaen aboot daein' naething that are a hantle richer than me."

"What," exclaimed my friend, "you do not believe the Bible? You do not believe what Solomon says?"

"I dinna ken aboot that, but I ken this: I

hae wrocht hard a' my days and I'm no rich yet."

It is said it is not good for man to be alone, but I say it is not good for a man to be idle. The indolent have always appeared to me weakly, either mentally or physically. To man it is not natural to be indolent. When mind and body are healthy there is no idleness. That lazy, careless feeling which may arise from weakness is often met with after a severe illness, but it may also be due to alcoholic poisoning. The cheery, happy look gives place to a gloomy sourness, and idleness is fixed in the gait. The idle fellow thinks only of himself and his imaginary ailments. He wants rousing. He will tell you that exercise for him is dangerous, as he has a weak heart. The cure for a weak heart is a good brisk walk. Hearts are often weak and flabby because the other muscles of the body are in the same state, and his general debility is due to the want of vigorous exercise. So with the other organs of the body. The

agricultural labourer is rarely troubled with his liver, and gout to him is unknown. The busy, industrious sparrow has many examples to show us if we had the eyes to see. But the sun is getting low, a chilly air is creeping round, and our musing comes to an end as we pick up the forgotten Graham and depart indoors.

NIDIFICATION.

"The cleft-tree
Offers its concealment to a few;
Their food its insects, and its moss
their nests;
Others apart, far in the grassy dale,
Or rough'ning waste, their humble
texture weave."

—*Thomson.*

NEST-BUILDING is an instinctive art, and although birds show considerable intelligence in the choosing of the materials for their nests, and ingenuity in the weaving of them together, the nests of the different species seldom vary. Circumstances may arise for strengthening the structure to prevent its falling, or being blown down, and instances of wonderful achievements in this are on record.

The Cuckoo builds no nest, but deposits its eggs in that of another bird, often that of the Hedge-Sparrow, which builds early, often before the leaves are on the hedge. Its comfortable nest, with its blue eggs, is known to every schoolboy. From this we may draw the conclusion that birds do not know their own eggs from those of others, even though they differ in size and colouring.

The Hawk often uses the old nests of other birds, and the Jackdaw, Tree-Creeper, Tits, and Starling look for holes in trees and walls in which to deposit their eggs. The Lapwing lays its eggs in a hole scooped out of the earth, and the Swift is no nest-builder either, a hole in the wall satisfying his wants. The Sand-Martin burrows in holes made by its beak in the hard sandstone banks, and the King-Fisher makes use of an old hole of the Water Vole by the water side in which to deposit her eggs and rear her young. The House-Martin's nest lasts for years, getting a little repair each year shortly

after they arrive. In the summer of 1900, which was very wet, a Martin's nest, under the eaves of my house, fell, being probably loosened by the long-continued rains. In the nest were four young birds, one of which had been killed by the fall. The others were placed in a small basket, which was put on the top of a kennel close by, and the old ones came and fed the young until they were able to fly. No effort was made to build a new nest to replace the fallen one. Perhaps the lateness of the season (September) might account for this. In the same spot there has been a nest for many years, the old structure having a yearly look over and patch up. When there is no natural cover the Martin roofs over its nest. In this it differs from the Swallow, which leaves its nest open on the top. The Martins' and Swallows' nests are made of mud, into which is introduced bits of straw and twigs, and outside they have the appearance of the "harling" often seen on houses. The Skylark builds its nest in a scooped-out

hollow. It is made of grasses, with sometimes a few leaves intermingled, the coarser grasses being outside, and the finer forming the inner part.

> "The daisied lea he loves, where tufts of grass
> Luxuriant crown the ridge; there, with his mate,
> He founds their lowly house of withered bents
> And coarsest speargrass; next the inner work
> With finer and still finer fibre lays,
> Rounding it curious with his speckled breast."

Herons like Rooks are gregarious in their nesting, constructing their nests, which are very large, of sticks, and placing them on the top of high trees. The Wood Pigeon's nest is a collection of sticks, without any lining. The Robin and Yellow Hammer's nest may often be found on a grassy bank, or by a ditch side, sometimes on a low bush. The outside is composed of dried grass, leaves, and moss, and lined with wool and hair.

Perhaps the most interesting of all nests is that of the Chaffinch. Placed in the fork of a tree, the outside ingeniously covered with the moss and lichen off the tree, it is most

Photo by *Charles Reid, Wishaw.*

CHAFFINCH AND NEST.

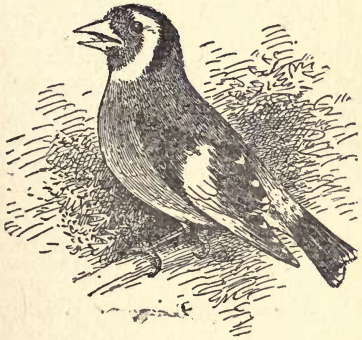
difficult to detect, but when discovered it reveals a marvellous example of nest-building. Wool enters largely into its composition, but lichen, moss, and a cottony down are found woven through it with hair, of which the inside of the nest is lined—the whole forming a round, compact, elastic mass, which is simply a work of art.

The nest of the Goldfinch somewhat resembles that of the Chaffinch, but it is not so deep, and instead of being placed between the forked branches, it is built at the end of a branch. The Goldfinch lines its nest with the vegetable down from the trees, or bits of wool. The inside of the nest is thus soft and cosy. The Sparrow builds a big, ravelled-looking nest, composed of a'thing it can get hold of. It is domed over, the bird entering by a hole at the side. The Sparrow makes no attempt at concealment. Another remarkable nest-builder is the Wren, which constructs a nest composed of the surrounding materials—moss, withered leaves,

and grass, warmly lined with soft feathers, and so fitted into the moss on the bank as almost to elude detection. The shape of the nest is spherical, the top being carefully covered, and only a small opening left at the side, just sufficient to allow two fingers to be inserted. The eggs, often up to ten or a dozen, but more often seven or eight, almost fill the nest, which is used for a retreat from the inclement weather by the young wrens some time after they are "flown."

> "How artfully contrived to favour warmth!
> Here read the reason of the vaulted roof;
> How Providence compensates every kind,
> The enormous disproportion that subsists
> Between the mother and the numerous brood
> Which her small bulk must quicken into life."

Another remarkable nest is that of the Long-Tailed Tit, which is domed like that of the Wren, and covered over the outside with lichen, thus resembling the nest of the Chaffinch. The difference between the nests of the Missel and Song Thrush is that the former is lined with



GOLDFINCH.

grass or moss, whereas the latter has just the bare plaster, composed of cow dung and decayed wood. The eggs are also easily identified. The Missel Thrush lays an egg of a greenish white colour, spotted irregularly with reddish spots of various sizes. The egg of the Song Thrush is of a greenish blue, and the spots, which are mostly at the thick end, are black. The Blackbird's nest resembles that of the Thrush, but over the plaster, which is mud, and thicker put on, there is a grass lining. The eggs are also different, being covered with very small mottled reddish brown markings, almost running into each other at the thick end. The nest of the Missel Thrush may be found in the forks of trees some distance from the ground. It is a conspicuous object, and not difficult to find. The Song Thrush builds lower down, the nest being placed on a branch of a tree, or in a bush or hedge, while the Blackbird selects a thick bush in the shrubbery

or the hedge, if there is sufficient cover. The nest of the Stonechat may be found on grassy banks near the bottom of bushes. It is exquisitely put together, and carefully concealed. The eggs, often five in number, are of a greenish blue colour, with some small brown spots. The Whinchat's nest, composed of dried grass and moss outside, and lined with grass, is found in like situations, the eggs somewhat similar in colour, etc., to those of the Stonechat. The Red Linnet's nest is placed near the ground in a whin bush. It is composed of moss and wool, lined with hair and a few feathers. The eggs are of a bluish white colour, spotted with reddish brown spots, the spots larger at the thick end. The Twite or Heather Lintie lays similar eggs, but nests on the ground. All the Warblers build a compact nest, very skilfully constructed of various materials, mostly domed, with a small opening at the side, that of the Wood Warbler and Chiff-Chaff being placed on the ground in

the neighbourhood of trees, the entrance to the nest of the latter being somewhat larger, and lined with feathers, the Wood Warbler using hair. The eggs are prettily covered with dark purple spots on a white ground, and usually number six or seven.

The Dipper or Water Craw builds a very large domed nest, consisting of dried leaves, moss and withered grass, which have the appearance of an accidental collection of vegetable *debris* left by the winter floods. It is often near a waterfall, mill-wheel, under a bank or overhanging ledge of rock, or under the excavated root of a large tree on the river bank, and is resorted to year after year. The eggs are white. The Wagtails build their nests in crannies of rocks, holes in the walls of stone bridges, on the banks of the river, or on the ground. They are loosely constructed, but comfortably lined with hair and wool. The eggs vary in colour, but are mostly of a grey-blue colour, richly

covered all over with grey and brown spots.

The common Sandpiper, Snipe, Curlew, and others of the wader class, deposit their eggs in a scooped-out hollow, into which a few leaves and grasses may have been scattered. There is no attempt to form a nest. The eggs of these birds are large in proportion to the size of the bird, and are covered with brown blots. The nests, if we may call them so, are to be found amongst long dry grass, near marshy ground, or amongst the heath on a moor.

The Tawny Owl is not particular about a nest, using an old one of another bird if it comes handy, and is of suitable dimensions. When it makes a nest for itself it is a loosely thrown together structure; but the Owl is often content with a hole in a tree. The eggs, four in number, are white, and almost round.

Birds build nests, not for homes or for a harbour or refuge in stormy weather, but solely for the purpose of hatching and rearing their young. In the construction of these nurseries

they are careful to place them in hidden places out of the way of the prying schoolboy, and to construct them of such material as will harmonise with the surroundings. The different species display great ingenuity and not a little architectural skill in the construction of their nests, not two being alike. When building, male and female work assiduously in carrying material and weaving the fabric. When the young are hatched they are unremitting in their attentions to their brood's wants, defending them from the attacks of enemies with great boldness and perseverance.

> "The poor Wren,
> The most diminutive of birds, will fight,
> Her young ones in her nest, against the Owl."
>
> —*Mac.* iv. 2.

The larger birds, such as the Partridge, Woodcock, and Duck, will often feign being wounded, and flutter along the ground with extended wings in the greatest distress, for the purpose of withdrawing attention from their nest or young.

The Lapwing, when you are far from her nest, will sweep down on you, coming so close that you can feel the rush of air from her wings in your face; but when you approach near her nest or young, she will leave you, and fly away to another part of the field, so as to draw you away from her nest.

When the Wild Duck leaves its nest, it covers its eggs over with withered grass and dried leaves to hide them from prying eyes during her absence, and when food fails or danger threatens the brood, she transports her young from one place to another by carrying them one by one, pressed between her legs or feet, as also does the Woodcock. The Wild Duck I have repeatedly seen carrying its young, and on two occasions when flying past the house, on my pointing a gun at her, she dropped her offspring. She returned shortly after, flying round, evidently in distress. The young were caught and placed along with a brood of tame ducks, but the female mallard

returned next day, picked up her chick, and flew away with it.

During nidification the male mallard casts its light gaudy plumage, and assumes the dusky brown plumage of its mate. Warburton, when he wrote—"To Him alone, who has ordered the Ostrich to remain on the earth, and allowed the Bat the range through the ethereal vault of heaven, is known why the drake for a very short period of the year should be so completely clothed in the raiment of the female that it requires a keen and penetrating eye to distinguish one from other. . . . Neither in the poultry yards of civilized man, nor through the vast expanse of Nature's wildest range, can there be found a drake in that plumage, which, at all other seasons of the year, is so remarkably splendid and diversified," was evidently not aware that the male of the domestic Rouen Duck, which corresponds exactly to the mallard in colour of plumage, undergoes the same transformation or moult of plumage each

spring, and as soon as the Eider-Duck begins to sit the glories of the drake's breeding plumage begins to fade. Other birds—*e.g.*, the Golden Plover, have a winter and a summer plumage, the latter being called the nuptial dress. This appears to be a provision of Nature to protect the species from molestation and from the attacks of enemies during the breeding season, by making them less conspicuous and more in colour harmony with their surroundings.

Some naturalists are of opinion that the birds which change their plumage in spring do not moult their feathers, but that a change of colour in the feather takes place, and that in some cases the surface of the barbs of the feathers peel off, and thus expose the bright feathers beneath, and that in some of the sea birds the feathers merely change colour by an increase or decrease in the amount of pigment in the feather without any textural change. This is difficult to understand, and is not our experience, and so far as it has reference to the Wild Duck it is not

the case, for at the time of the "eclipse" (under which name the spring moult is known) the males are so helpless for the want of their wing feathers that they cannot fly any distance, and are for a time almost helpless, and an easy prey to their natural enemies.

NATURE'S CHOIR.

"THE bird is your true poet; I have seen him,
When the snow wrapped his seeds and not a crumb
Was in his larder, perch upon a branch,
And sing from his brave heart a song of trust
In Providence, who feeds him though he sows not,
Nor gathers into barns. Whate'er his fears
Or sorrows be, his spirit bears him up.
Cares ne'er o'ermaster him, for 'tis his wont
To stifle them with music. Out of sight
He buries them to the depth of his sweet song,
And gives them a melodious sepulture."

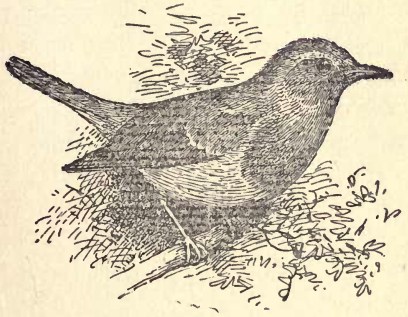
—*Anon.*

WHEN the leaves turn yellow and the summer is gone, and the boisterous wind foretells the coming of winter, the Robin,

"The bird that comes about our doors
When Autumn winds are sobbing,"

perches on the water-barrel and sings the summer dirge. His clear, loud song is sweet and

somewhat plaintive, but it is a spirited deliverance, very expressive, and most pleasing, and coming as it does when the wood choir is hushed, it is highly appreciated.



ROBIN.

Solitary in his habits, the Robin can bear no rival near, and will fight to the death for his particular bit of ground. The Robin will be found in the most out-of-the-way places, but never very far from man's residence. He chums with

the gravedigger, the seclusion of the kirkyard just suiting his temperament.

> "The Redbreast oft at evening hours
> Doth kindly lend his little aid
> With hoary moss and gathered flowers
> To deck the ground where thou art laid."

The gardener in his digging operations is often accompanied by a robin, who picks and eats the upturned worms. The Robin has no fear, and the gardener never molests him. The Robin may be sitting on one side of the spade, while the gardener has his foot on the other side, so confident is he of the gardener's friendship. "Trust on one side engenders confidence on the other, and mutual attachment is the natural result."

When the weather gets cold and stormy there is a robin that comes into the house, flying round and perching anywhere.

> "Then, hopping o'er the floor,
> Eyes all the smiling family askance,
> And pecks and starts and wonders where he is."

When it is very cold he roosts in the kitchen

at night. He is never disturbed, and gets so tame that he will hop on to the table at dinner and help himself, and in spring will come back and steal from the table for his family outside.

The Wren, another favourite home bird, and closely associated with the Robin in song and story, is a wonderful musician. He has a clear, mellow song, with a compass, considering the size of the bird—three and a-half inches in length and weighing less than three drachms—that is something wonderful. We find the Wren in all obscure corners and "hoddie" holes.

"And thro' the winter gloomy hours
Sings cheerily: nor yet hath lost
His blitheness, chill'd by pinching frost.
. . . . .
Sing, little bird! Sing on, designed
A lesson for our anxious kind;
That we, like thee, with heart's content
Enjoy the blessings God hath sent;
His bounty trust, perform His will,
Nor ante-date uncertain ill!"

The Chaffinch or Shilfa is as common as the sparrow with us. The Shilfa is a powerful

imitator, and is often trained to repeat the notes of other birds, but his own song does not amount to much more than "Tweet, tweet, tweet," or what Macgillivray describes as "Wee, wee, wee, wee drucken Sowie," repeated over and over again, which is rather tiresome, and although I have heard them sing a short, pleasing song, they are not great musicians. Tennyson says:

> "Then as a little helpless, innocent bird,
> That has but one plain passage of a few notes,
> Will sing the simple passage o'er and o'er,
> For all one April morning, till the ear
> Wearies to hear it."

When we hear of the Shilfa having "loud, clear, melodious, flute-like, and penetrating" notes, we suspect it is a trained bird that is referred to. So with the doleful "Yite, yite, ye," or "Deil, deil, deil tak' ye," or, as the English have it, "A little bit of bread, and no che-e-e-se," of the Yellow-Hammer, it hardly rises to a song.

The Starling, a valuable ally to the farmer, is a bird with a beautiful coat and crow-like

walk, that sings a low pleasant song with harp-like notes, which is accompanied by a peculiar twitter.

The Water Ouzel or Water Craw is said to have a "sonorous song, which startles the ear as it comes mingled with the hoarse notes of the torrent or the rushing of the wintry water-fall, sometimes in the midst of a snow storm," and Polwhele says "it has a resemblance to the sound of water gurgling amongst the pebbles of the stream." It is difficult to put it on paper, and the nearest song I can liken it to is that of the Linnet, only it is stronger and rougher. I have met many that are quite familiar with the bird that never heard it sing.

The Song Thrush—

"The Mavis wild wi' mony a note,"

or musical Thrush, as its scientific name—*Turdus musicas*—indicates, is plentiful all around us, too much so when the berries are ripe. This grand songster is early in song and an early riser. Perched on the top of a tall tree, he

pipes forth with lusty voice his rich, full, and clear notes on the first dawn of early spring morn. Macgillivray gives a good imitation of the song—

> "With glee, with glee, with glee,
> Cheer up, cheer up, cheer up; here
> Nothing to harm us; they sing merrily,
> Sing to the loved ones whose nest is near,
> Qui, qui, qui, kween, quip,
> Tiurru, tiurru, chipiwi;
> Too-tee, too-tee, chin choo,
> Chirri, chirri, chooee,
> Quiu, qui, qui."

The song is composed of sentences or multiple of notes repeated, after which comes a subdued warble. For richness and sweetness we have no bird that comes near it, and for grandeur and execution the Mavis has no equal. "After some of those full, clear, and spirited notes with which he at all times opens his song, he will rapidly hurl forth the most imperious calls, many of them in wondrous metallic chimes; then, as if suddenly catching himself, give out those sweet, undulating, glassy-toned strains of conciliation

THRUSH

that float away as if breathing new life on the leafless trees, and inspiring with love the whole tenants of the grove." List to him in the gloamin'! What ventriloquism! Do these soft sweet strains proceed from beneath the cope-stone of the wall, or the trunk of the tree on which he is seated? No; it is his powerful song, pent up, and given in passionate whispers to the ear of his mate; his tongue as if every now and then striking a silver bell, and his whole articulation suited to the hush that reigns and the close proximity of the object of his affections. With the rising sun he wakes the earth, calling into tune thousands of smaller tongues, and alone, in the last rays of dissolving evening, he closes with unrivalled eloquence the grand concert. Often in the evening have I sat and listened, entranced by the loud, clear, mellow notes of rival birds perched on the top of the spruce trees.

"Oh, come with me into the summer woods:
They call and beckon us; oh, hark and hear
How yon brave Thrush upon the alder floods
The world with song triumphant, silvery, clear."

The Blackbird may be said to rival the Mavis in his early song and early rising. He is said to be the true harbinger of spring, singing his song long before the leaves are upon the trees, often in frost and snow, and when no other bird voice but that of the plaintive robin is to be heard.

> "Merry it is in the good green wood
> When the Mavis and Merle are singing."

The song of the Blackbird varies. In the early morning, sometimes as early as two o'clock, it may be heard, clear, loud, and sonorous, and again at mid-day. At the close of departing day the song has always appeared to me to be more mellow, without the harsh notes introduced in the morning. At any time it is a delightful song, of great power and compass, with a flute-like tone which we do not have in the Thrush; but it wants the variety and spirit of the latter's song. It is Tennyson who sings—

> "O Blackbird! sing me something well;
> While all the neighbours shoot the round,
> I keep smooth plots of fruitful ground,
> Where thou may'st warble, eat, and dwell."

It is amusing to watch the antics of the Blackbirds as they hop round the lawn in search of worms after a shower. They jump, listen with their head turned to one side, and then pounce upon the worm which has the curiosity to look up. If it is a large worm, considerable difficulty is encountered in pulling him out whole, and the bird has to exert and stretch himself to the utmost. When he gets the worm out he pecks it all over, and then swallows it at one mouthful, and goes hopping on the look-out for more.

The song of the Missel Thrush, sometimes called by boys the "Monthly Mavie," consists of a few sharp, loud, disjointed notes, and is best heard during a storm as he sits on the swaying top of a tall tree and whistles defiance to the gale, hence his name Storm Cock. It is a larger bird than the common Mavis, and lays eggs with reddish brown spots, whereas the Mavis lays a blue-coloured egg with dark spots. The nests are also easily distinguished, the

Mavis plastering the inside of his nest with clay, that of the Missel Thrush being lined with withered grass.

I never see or hear a Sky-Lark without thinking of Shelley's ode :—

"Higher still and higher
From the earth thou springest
Like a cloud of fire;
The blue deep thou wingest,
And singing still dost soar, and
Soaring ever, singest.

. . . .

Teach me half the gladness
That thy brain must know;
Such harmonious madness
From thy lips would flow;
The world would listen then, as
I am listening now."

The Lark is an early riser—all birds are—hence the saying—"Up wi' the lark in the mornin';" and for beauty of song, compass, and variety, excels all our song birds. He springs from the earth, and in spiral fashion he climbs aloft in gradually increasing circles. fluttering rapidly with his wings, all the time

sending forth the most ravishing song until he reaches his zenith. Then he hovers and sings in the most bewitching manner; then, reversing in gradually narrowing circles, he descends until near the ground, when his song suddenly ceases, and he drops obliquely and silently to the earth.

"The lark, my child;
The morn has just looked out and smiled,
When he starts from his grassy nest,
And is up and away with the dew on his breast,
And a hymn in his heart, to yon pure bright sphere,
To warble it out in his Maker's ear."

Nothing seems to affect the Lark's voice as he soars on high. Most birds sing with the exhaling breath only, but the Lark gives voice both while exhaling and inhaling the breath, which accounts for the continuous song from the time he leaves the earth until his drop on his return. The voice of the Lark is very powerful, considering the size of the bird, and the song is sprightly and not without pathos. Wallace describes it as "simply

bewitching, as he towers heavenward on a bright, delicious, summer morning, struggling upward and onward, circling his way through the silvery mist, which has risen with the approach of the sun, and pouring forth, as he ascends, in the most luscious and rapturing manner, a flood of delightful melody, which, for compass and variety, is perfectly amazing."

"Hearing thee, or others of thy kind,
As full of gladness and as free of heaven;
I, with my fate contented, will plod on,
And hope for higher raptures when life's day is done."

The Lark (*Scottice* Laverock) is found all over the cultivated parts of the country. In the evening it may be heard singing on the ground amongst the newly briarded oats. It was Burns who wrote :—

"And when the Lark, 'tween light and dark,
Blithe waukens by the daisy's side,
And mounts and sings on fluttering wings,
A weaworn ghaist I hameward glide."

The Skylark is a pretty and graceful bird, and at this season the cock with crest erect

chasing the hen attracts the attention of all interested in bird life. I have always felt, on hearing a Lark singing in a cage hung from the window in a smoky town, that it was the cry of a prisoner who longed for the green fields and blue vault of heaven.

> "Who can divine what impulses from God
> Reached the caged Skylark, within a town abode,
> From his poor inch or two of daisied sod?
> O, yield him back his privilege!"

But there is another side, so well put in verse by Joseph Wright:—

> "Gin I could ope the door to thee,
> Ye wadna lang imprisoned be;
> But far awa' frae here wad flee
> On whirring wing,
> And high abune yon gowan lea
> Wad sweetly sing.
>
> . . . .
>
> But whaur ye are there's hearts tae cheer;
> Puir folks hemmed in frae year to year,
> Whose lives are hard an' unco drear,
> They need yer sang;
> To wish ye far awa' frae here
> Is maybe wrang."

After the Lark's song, the soft, simple warble

of the Hedge-Accentor proclaims we are on earth once more. The "Bluey's" song is short, lively, and sweet. The Hedge-Accentor or Hedge-Sparrow is one of those birds that pays no attention to its neighbours: it neither fights or gossips.

Of the smaller birds there are none to approach the Linnet *(Fringilla Cannabina)*—the Lintie of the Scottish poets—for song.

"I waudna gie the Lintie's sang
Sae merry on the broomy lea,
For a' the notes that ever rang
From a' the harps o' minstrelsie.
Mair dear to me where buss or breer
Amang the pathless heather grows
The Lintie's wild sweet note I hear,
As on the ev'nin' breeze it flows."

The Lintie is a bird of sombre colours, the only bright spot being the red on the head of the old cocks, hence the term Red or Rose Lintie. A whinny knowe or muir is the place to find these birds, and to hear their merry, clear song when a number are gathered together in the autumn perched on a tree is to listen to a bird

concert. They will sing for a long time if not disturbed. Their notes consist of "Weke, weke," "Wike, wike," "Wake, wake," frequently repeated. That makes their song, which varies from the plaintive to the gay, with a mellow tone and masterly execution. They have a beautiful call-note, which bird-catchers know well. The Lintie is a favourite cage-bird, and large numbers are caught every winter and sold for that purpose. Once they settle down after being caught and confined they make a good cage-bird, and seem to thrive in confinement, for I have seen one fourteen years old, or rather it was that time since it was caught. They are fond of the seeds of the wild mustard *(Sinapsis Arvensis)*, or what the farmers call "scaillies." The Lintie is a late breeder, and in autumn gathers in flocks, frequenting farm-steadings. In winter many of them fall a prey to the bird-catcher.

The Red Lintie is often used to cross with Canaries and Goldfinches to produce "mules." A little less in size, but much resembling the

Red Linnet, except in colour of throat and bill, is the Heather Linnet, or Mountain Linnet, often called the Twite. The Heather Lintie's song, while melodious, low, and sweet, has not the variety of notes of the Red Lintie. The Greenfinch, which fraternises with the Linties in autumn, has not much of a song, although there are those who hear music in it. The Whinchat's song is weak but pleasant, and it sings late in the evening; and the restless Stonechat gives voice to a monotonous whistle.

We have both the Bullfinch and Goldfinch breeding close to us. The former is rather plentiful, but the latter is somewhat scarce. I rather like the notes of the Goldfinch, although disjointed. The "finck, finck," after the twittering notes, are peculiar, but to me most pleasing. The Bullfinch has a low, soft, mellow song, but you require to be near to hear it, and in confinement it is capable of being taught to whistle a variety of tunes. Both birds are admired for their lovely plumage.

BULLFINCH.

In the summer months the Wood Warbler, the Willow Wren, and Chiff-Chaff visit us, clearing the trees of small insects and aphis, and charming us with their sweet, pleasing songs, which they continue to sing all day and well into the summer until their young are hatched.

"The melody of birds," says Broderip in his "Zoological Recreations," "finds its way to the ear of everyone, but the cause that prompts the outpourings that make copse, rock, and river ring again on a fine spring morning, is more a matter of doubt with ornithologists than the uninitiated in zoological mysteries might suppose. Much has been written on this subject, and upon a consideration of the different opinions, aided by our own observations, we are inclined to think that love and rivalry are the two great stimulants, though we do not mean to deny that a bird may sing from mere gaiety of heart, arising from finding itself in the haunts dear to it, and in the midst of plenty of the food it likes."

In this country the season of reproduction is undoubtedly that wherein

> "The isle is full of pleasant noises,
> Sounds, and sweetness that give delight."

And about ten weeks have been mentioned as the period during which most of our wild birds are in song. That there is an exception to this rule, few can doubt. We have heard a wild Thrush, one of the sweetest singers of his tribe, sing far into September, and never could find that he had a mate. Then, again, we have the autumnal, and even the winter, notes of the Robin long after the breeding season; and caged birds, if well fed and kept, will sing the greater part of the year.

The Mavis and Blackbird open the concert before the year is two months old, and by April we have the full chorus, which is continued until July, when all are employed in nidification. Gradually the music declines until October, when all is hushed until the plaintive song of the Robin and the sweet, gentle song of the Wren is heard,

as the leaves turn yellow and golden, and fall fluttering to the ground. It is difficult to put on paper the voice of the different birds—their melodious love warbles, their call-notes, the fierce notes of defiance, the notes of alarm, down to the chirp of the young. "No, the melody of birds, like the fragrance of flowers," says Bechstein, "cannot be described; it must be felt, and that by one whose senses are properly attuned to outward harmony by an indwelling and abiding love of the beautiful and the pure in nature. To him the soaring Lark will seem, indeed, to pour forth at heaven's gate a morning hymn of praise, and the nightingale to chant, amid the leafy woodlands, a vesper song of thankfulness; the full chorus of feathered minstrelsy will be to him like an angel choir, scattering melody on all around, which sinks into the soul like summer rain into the earth, gladdening and refreshing it."

How refreshing it is to walk in the country in the spring of the year and hear the woods

resound with the song of the birds, to be able not only to distinguish the birds themselves, but to know the song of each species. This is a hobby anyone can pursue with great pleasure to himself and profit to his health. To the vigilant observer there is much to be found that is instructive and useful. The different call-notes, the cry of anger, fear or jealousy belong to each, for all birds have a language of their own, and are able to communicate with each other. Examples need not be quoted, they abound. While we admire the flowers by the roadway, and enjoy the shade of the trees, worldly thoughts vanish. Our thoughts rise to higher things — to Him who out of nothing called all these wonders into being. The air is full of pleasant odours, and we feel we can never drink in enough of nature's beauties. Thomas a' Kempis said :— "If, indeed, thy heart were right, then would every creature be to thee a mirror of life, and a book of holy doctrine."

Looking back on many long and delightful walks communing with nature, I can truly say with Tennyson—

> "The woods were filled so full of song,
> There seemed no room for sense of wrong."

TROOTS.

"At Crieff Police Court, a notorious poacher was brought up on a charge of having been found drunk and incapable in Dollerie Terrace the previous night. The Magistrate (Provost Finlayson) remarked to the accused that he and his friends seemed to be possessed of plenty of money at present. What was in season at present? Accused—Troots. (Laughter.)"—*Strathearn Herald*, 21st April, 1900.

HE common trout *(Salmo fario)* is in season from April to October, but he does not have the firm, plump appearance of a fat fish before there is abundance of insect life, and that is not till May month is well advanced. By that time the waters are low and clear, the "snaw broo" is all away, the banks of the streams clad with verdure, the trees and bushes in full foliage, and the Cuckoo's voice is heard

throughout the land. The hum of insect life is all around. The green sward—nature's carpeting—along the burn-side hides the tread of the angler, as he crouches and creeps to where there is a rising trout. Trout are quick of sight. The experienced angler knows it. To be successful an angler requires very close observation of the habits of the trout. His eye must be quick, his touch light and from the wrist, like that of the experienced surgeon, and his perseverance everlasting.

Anyone with a love of nature will find angling something more than labour or exercise. He, if a botanist, will find many things to interest him along the river's bank. If a geologist, he will find rocks and stones of all kinds from which to learn; and if a zoologist, many animals and birds to interest him.

On the banks of the Earn may be seen that living jewel, the Kingfisher, the most gorgeous of all our British birds; Water Hens, the Water Dipper, Water Wagtail, more than one kind of

duck, and mostly all of our warblers may be found in the bushes on the river's bank. One may be fortunate enough to see an Otter, but they are not numerous.

THE KINGFISHER.

Trout fishing is said to be the working man's recreation. It is certainly one of the best modes of relieving a troubled mind, for the close

application needed takes the thoughts away from other things, and the bodily exercise brings back health to the weary body, which in this hurrying age has no time to rest. The only rest got now-a-days is a change of occupation. Not only does the act of fishing tend to health, but the pure air breathed from the fertile fields is the best medicine the sedentary town man can have. Trout fishing is in a sense free—that is, it is not protected by law. Some proprietors watch their rivers, the excuse being that anglers disturb the game and the game birds nesting. A little closer examination of the subject will reveal another side to the question: that there is a big trade done in the artificial rearing of trout, almost if not quite as large as the hatching and rearing of pheasants and the providing of bagged foxes for sport to my lords and ladies. Private ponds, lochs, and lakes are stocked with the fry, and very fine sport is often enjoyed in the waters where the fry have thriven and have not been devoured by the the older natives.

The best basket of trout I ever got was off a land-locked basin, wherein Loch Leven fry had been deposited a few years previously. But in

THE HERON.

the cultivation of this sport and in the preservation of the trout from their natural enemies, there are hardships. The Otter, Heron, Kingfisher,

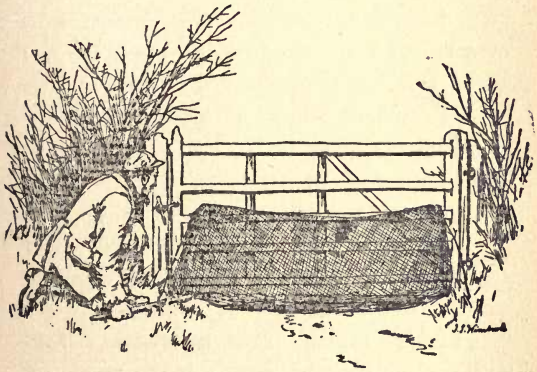
Ducks, Rats, Swans, &c., have all to go, as they are said to devour the spawn. The Otter is somewhat rare in our northern streams, but I have seen him repeatedly busy fishing along with a mate in the evening. The Heron is common all along the Pow, and takes a few fish, but as he fishes in shallow water and takes a mixed diet of frogs, rats, &c., the harm he does to the fishing is infinitesimal, and he is so majestic a bird that he might well be spared the trout he takes. The Pike and Perch are also natural enemies, but for these I have not a word of commiseration. In many of the pools of the Earn Pike and Perch of large size swarm, and they do far more harm to the trout fishing than all the birds and animals on *terra firma*.

Recently, the local part of the Earn was netted for Pike, but owing to the banks, and the rubbish that accumulates in the bottom and corners of the pools, many must have escaped the net. The effect of this netting must be felt by and by.

To preserve trout in lochs and ponds that big baskets may be made, and duly chronicled in the newspapers, is not sport, but, like pheasant-rearing, it is fashionable, and gives employment to men. Sir Herbert Maxwell refers to this in "Memoirs of the Months" as follows:—"Unluckily the killing of trout has been made in Scotland a matter of prize-winning. Almost daily is the sacred bosom of Loch Leven desecrated by this ignoble rivalry; and the hallowed founts of Ettrick and Yarrow are incessantly ransacked with an ardour certainly not born of the sport offered by the wretched fishlets creeled. In many districts the open fishings are rendered worthless to fair anglers by the miserable snigglers who destroy gravid and unseasonable fish all through the winter months." To the ordinary mind trout would have little fascination for the poacher, unless he were to poison or net them, and that can only be done in certain streams and at certain places.

But is the poacher a mere mercenary individual

without any of the human sporting instincts? I have never found him so. He has always appeared to me to be a man who had no mercenary motives, for, if questioned, he will tell you that poaching found him poor and kept him so. It is a love of sport and adventure that makes a man a poacher. He is generally



POACHER WITH NET SET FOR HARE.

a lover and keen student of nature in all her varying forms. He has a keen eye to note

the haunts and ways of game, so that he can unerringly place his long net where he will make the biggest haul. Anyone who doubts what I say let him join the Crieff poaching company (unlimited) some night when they visit with their long tackle the outlying districts of some close preserves, and if he does not acknowledge that the sport is a fascinating and exciting one, his senses must be dead or far below normal. But if he values his good name, I advise him not to repeat the experiment, provided he escapes capture on his first attempt.

Poachers, if taken in hand in time, might be made good gamekeepers or watchers, but once they get into evil habits, or indulge their taste for strong drink, they sink lower and lower, and are beyond reclamation. That many poachers are not actually bad at heart I believe, but bad companions and lazy habits have such a hold upon them that they cannot shake them off. Punishment will never prevent poaching. The only way to put it down is by getting hold of

and punishing the men who buy the poached game, and thus prevent the poacher from getting rid of his ill-gotten gains. It must, I suppose, be conceded that the regular poacher is a selfish individual, otherwise he would not be oblivious to the misery he brings upon his wife and family, if he has any. At the start of his career he may not be an altogether despicable creature, but when he becomes a drunkard and a thief he ought to be ostracised from all society.

THE CUSHIE-DOO.

(Columba Palumbus.)

"On lofty aiks the cushat's wail,
And echoes con the doolfu' tale."—*Burns.*

THE Wood Pigeon, Ring-Dove, or Cushat (*Scottice*, Cushie-Doo), is a constant resident with us. They are everywhere plentiful, and being large birds—the largest of the species—and

voracious grain and vegetable eaters, they do a vast deal of harm to farm crops. In the autumn they gather into large flocks, feeding on the farmer's autumn-sown wheat, beech masts, and acorns (which they swallow whole), and in winter on the seeds of various kinds of weeds and the green shoots of the "sheughed" swedes.

From my youth up the Cushat has been familiar to me, and when a boy residing with an aged relative, who was very fond of pigeon broth, I had perforce to study its habits in order to secure specimens for the pot, at times a no light task. Of a wild and distrustful nature, the Cushat will not allow anyone to approach within gun-shot in the open fields, but by noting where the birds feed, and getting under cover, they can be shot when they alight, which they do after circling round; but you have to look sharp, for when they settle on the ground they have a good look round before they begin to feed, and if any movement or anything strange arouses their suspicions, they

are off at once. A field of wheat (a cereal of which they are very fond) or barley, where part of the grain is laid or broken down by wind or rain, is a good place to find them when the grain is ripening, and if approached cautiously and under cover, a right and left "in the blue" may be got as they rise in a cloud, and in this way a couple of brace, or more, may be got.

I remember, one August afternoon, in a few hours, with an old muzzle-loader, shooting so many in a clump of trees at the corner of a field of barley, just turning yellow, that I had very great difficulty in carrying them home, having no bag with me. Only one, so far as I saw, escaped of all that came to that spot during the afternoon, the branches of the spruce trees effectually concealing me from the pigeons as they came in. They ceased coming all at once. Was it the escaped one that warned the others?

In 1894, Sir John Gilmour had from twenty to twenty-five pigeons shot each month (total shot 265), and their crops examined to find out

the good and damage done by these birds to farm crops (Highland and Agricultural Society's Transactions for 1896.) This investigation showed that the Ring-Dove was largely a grain and leaf-devouring bird, and, on the whole, injurious to the farmer; but it is difficult—nay, impossible, to arrive at a just conclusion. The principal grain found in the crops was barley—the place of investigation was Fife — and the vegetable portion consisted largely of clover and turnip leaves; but in addition to these there were quantities of the flower buds of the buttercup, the seeds of charlock, and other injurious weeds. In January and February the food consisted largely of turnip leaves; in March, clovers were added to the diet; and in April, grains of barley and oats got from the newly-sown fields; in May, grain, grass seeds, and flowers of the beech; June, elm seeds, buttercup buds, and clover; July, clovers, spring seeds, buttercup buds, and the leaves of cruciferous plants; August, September, and October, grain; November, beans,

tares, beech masts, wild cherries, and haws; December, grain and beech nuts. In the crop of one bird 102 beech masts and 3 beans were found. The conclusion Sir John arrived at from this investigation, in which he was assisted by that eminent botanist, Professor M'Alpine, was that "the character of the Wood Pigeon (the numbers of which had largely increased of late years) does not improve, but that his destruction of clover and grain far outweighs any benefit he may effect."

But for all that the cushat has some redeeming qualities. He is, unlike the rook, of some value when dead, and he does not live always on corn and clovers. "An agricultural friend of mine," says St John in his "Wild Sports of the Scottish Highlands," "who had yielded with a tolerably good grace to my arguments in favour of the rook, pointed out to me an immense flock of wood pigeons busily at work on a field of young clover, which had been under barley the last season. 'There,' he said, 'you constantly

say that every bird does more good than harm; what good are those birds doing to my young clover?' On this, in furtherance of my favourite axiom, that *every wild animal is of service to us*, I determined to shoot some of the wood pigeons, that I might see what they actually were feeding on; for I did not at all fall into my friend's idea that they were grazing on his clover. By watching their line of flight from the fields to the woods, and sending a man round to drive them off the clover, I managed to kill eight of the birds as they flew over my head. I took them to his house, and we opened their crops to see what they contained. Every pigeon's crop was as full as it could possibly be of the seeds of two of the worst weeds in the country—the wild mustard and the rag weed, which they had found remaining on the surface of the ground, these plants ripening their seeds before the corn is cut. Now, no amount of human labour and search could have collected on the same ground, at that time of the year,

as much of these weeds as was consumed by each of these five or six hundred wood pigeons daily for two or three weeks together."

A few years ago, in the month of July, I noticed Wood Pigeons feeding daily in one of my grass parks, always at one particular spot. Curious to know what they were getting there, I concealed myself below a large plane tree close by. I had not long to wait when I heard the rush of wings and a bird settle in the tree overhead. The foliage was too dense to see what it was. By and by others came in after flying round, and, sitting quiet for a time, dropped obliquely down amongst the grass within easy shot of me, and I secured a brace.

On my way home, I was astonished to notice what I took to be a dead hare hung up in the hedge, but a closer examination showed it to be a hive of bees. A straw skep was got and the "cast" secured, but when the skep was taken home the bees flew away and alighted on a

tree close by, from which they were subsequently taken by cutting the branch to which they were attached. On dissecting the pigeons I had shot, I found their crops full of the seeds of the wild viola or heartsease *(v. tricolor)*, which grew plentifully on this poor bit of land.

Wild Pigeons, like the tame species, are very fond of sand, and require, when feeding on grain, coarse sand or gravel to aid their digestion, for which they fly long distances, often to the sea-shore. I have often, when waiting to get a shot, sat and watched the Wild Pigeons feeding. A single bird may be seen sitting on the fence, and not far off, perhaps, two or more are sitting on the ground. Soon the one on the fence joins the others. Away high up in the air and far off may be seen a black speck. By and by it grows larger. It is travelling at a rapid rate, and by its flight we can now know it to be a Wood Pigeon. It rapidly descends—almost falling—flies round in a large circle, and drops close

to the others. In twos and threes they now arrive from all quarters, falling, as it were, from the sky. It is this gregarious habit and the signs of food that make the Wild Pigeon fall an easy prey to the gun by using either natural or artificial decoys.

In the Carse of Gowrie, during spring or autumn, a good shot may, with decoys, secure fifty or more per day, while concealed in a hut rudely constructed of branches and placed at the side of a field newly sown with wheat. The Ring-Dove is very fond of wheat, also of beans and peas, and the quantity of beans the bird can pack away in its crop is sometimes astonishing. The crop is very often so gorged with food that on being shot it will burst when the bird's body strikes the ground.

When feeding in flocks Ring-Doves may be noticed continually rising from the ground and flying a short distance before again alighting, which makes it very difficult to approach them without

being seen, if there is no cover, as there are always some of them on the move. I believe this apparent restlessness is not for protection, but to procure food. What at a distance appears to be the continual rising of a few birds is in reality those in the rear flying over those in the front to get "turn about" of the first of the food, and in this way all share alike.

The Wood Pigeon is very difficult to tame. I have often taken the young from the nest and reared them, but could never tame them. St John says he reared them so that they became tolerably familiar till the first moult, but so soon as they acquired strength of plumage and wing they invariably left.

No one, so far as I know, has succeeded in getting Wood Pigeons to breed in confinement. They are of a wild, untameable nature, and though nesting and roosting in the woods close to man's domain, they are very easily disturbed, and when they are set up they fly away with loud beats of their wings.

"Through lofty groves the Ring-Dove roves,
The path of man to shun it;
The hazel bush o'erhangs the Thrush;
The spreading morn the Linnet.
Thus every kind their pleasure find,
The savage and the tender;
Some social join and leagues combine,
Some solitary wander."

—*Burns.*

On the spruce trees, twenty or more feet from the ground, may be seen the nest, composed of a few rough sticks, loosely thrown together, and so open that the two white eggs may sometimes be seen shining through the structure. They return year by year to the same trees to nest, but, so far as I have observed, always make—I cannot say build—a new nest a few feet above the old. Although suspicious of man, and giving him a wide berth in the open, in the breeding season they build quite close to my house, and at that time have apparently no fear of man.

In some parts the Wood Pigeon is called the "Queest" (Latin *questus*—a complaining), it being

the general opinion (which I do not share) that the pigeon's cry is full of sadness.

> "And oft I hear the tender dove
> In firy woodlands making moan."

Walking in the garden with my lady nicotine in the eve of a hot summer day, I find the gentle murmuring "coo-coo, roo-o-o" of the Ring-Doves in the adjoining wood very pleasing, and rather soothing than otherwise. Contrasted with the shrill cry —"Cur-lieu, cur-lieu," a mile away, of the Whaup, whose mate is sitting on eggs on the moor to the east, or the harsh, grating "crek crek" of the Landrail in the field close by, it is far from being a querulous, melancholy sound, as it is often termed in books treating of ornithology.

Later on, in that bewitching hour "'tween the gloamin' and the mirk," when the Mavis has finished his evening roundelay and dropped from his elevated perch into the wood, the Wood-cocks begin to fly, uttering their hoarse, subdued croak. Their nests are close by. They are

apparently out for exercise, for they fly round in wide circles, appearing again and again. The Bats are now out. Their favourite beat is from the house to the gate, but they sometimes fly further afield when food is scarce. The Frogs are croaking in the marsh, and the hoot of the Owl floats over the top of the trees. All else is still. The birds and beasts of day have gone to rest.

PERCH AND PIKE FISHING.

"Our plenteous streams a various race supply,
The bright-eyed perch, with fins of deepest dye."

PIKE.

WE had had a fortnight of very dry, warm weather, more like that of an Indian summer than the weather we are accustomed to in July. The ground was parched and hot under foot. In many places the earth was cracked, gaping for the rain which did not come. The

grass on the "knowes," where there was little depth of earth, was burned brown. Lower down in the valley the grass had lost its fresh green colour, the reeds cracked as they rustled against each other, and everything looked scorched and wan. Many of the wells and springs had dried up, and water for man and beast was scarce. The Earn was never known to be so low in the memory of the "oldest inhabitant"; so the smith said. Stories of trout of great size having been seen in the pools were common, and in the evening they were to be seen chasing the minnows on the shallows and running aground in doing so. I had tried hard, night after night, to get hold of one of the leviathans, but my industry and patience were not rewarded beyond the usual pounder, and they could be got almost any night. The water had got so low, and was so clear that to attempt to catch Trout in any number during the day was a fruitless exertion. The return, if not *nil*, was such as gave little

encouragement to pursue the "gentle art," so far as trout were concerned, but it was ideal weather for Perch fishing, and as many of the large pools contained Perch in quantity, and my wife having a penchant for that kind of sport, I, one of these hot days, rigged up tackle for the pachydermatous fish, taking my single-handed trout-rod also, in case the Perch would not "bite," or, for change, if I got tired of the more humble sport.

It was about 2 P.M. when we left the house, a clear, blue sky overhead, and not a speck of cloud in all the heavens. The sun shone fiercely, and burned into my back through my woollen clothing. The least exertion was troublesome and made the sweat ooze from every pore. There was not a breath. The stillness was profound, not even a whisper among the leaves. The birds had evidently not wakened from their mid-day siesta, for all song was hushed. A couple of Larks were dusting themselves amongst the "stoor" in the road. A few Rooks

and one or two small Crows (Starlings) were to be seen in the pasture fields. A Mavis flew from the field across the road into the wood as we passed. Her nest was not far away, for we could hear the cry of the young as she fed them. One or two young Rabbits were to be seen sitting by the roadside, enjoying the warmth of the sun. As we approach the stream, a pair of Water-Hens run down the bank, and, plunging into the water, swim rapidly to the other side. This looks a good day for the pool at the mouth of the Pow. The perch rod is put together, casting-line with Stewart tackle fastened on, and with the red, blue, and white float, fixed about eighteen inches from the hook, it only requires the worm to complete, and that is easily fixed.

My favourite terrier, who has been hunting the reedy banks of the burn, flushes a Mallard Duck. The poor thing is in great fear and distress until she gets her brood of ducklings out into the stream, and out of harm's way.

Further up the burn may be seen a Teal with her brood; but I have no time for further observation, as the cry, "The float's away," is a call to action. The perch—for so it turns out to be—is soon landed. Another worm is impaled, and the float has hardly time to settle when it disappears under the water. Another perch, this time a bigger one. They now bite quickly, and I am kept busily employed taking the fish off the hook and putting on fresh worms. Every fish that bites is not hooked, but, this afternoon, very few get away. Some time is lost with an eel that could not resist the temptation of a worm dangling in the water. In a short time the bag is full; the number 33; weight, 7 lbs. The angler is now tired. Sport has been fast and furious, and one soon gets satiated with success.

We stroll down the river bank. The river here is wide, but not very deep, water plants growing far into the stream. At a point close to the bank, where the water is about two feet

deep, my wife draws my attention to a big fish, which is evidently asleep. "Is it a Salmon?" she asks. I see at once it is a Pike. I try him with a worm on the perch tackle. No use. I then take off the worm, and tried to "snigger" him, the way certain kind of sportsmen (?) catch salmon. Dropping the hook down by the side of the fish and jerking it rapidly upwards, I am fast to the monster by the belly. It is all done so quick that Esox Lucius is at the other side of the river before I am aware; but now I have him in hand. With fine gut and foul hooked I expect to be broken every moment; but I apply little pressure, and just pressure enough. After making two or three fierce runs, taking out about fifteen yards of line each run, and adding a few somersaults to give variety to the scene, Jack begins to show signs of exhaustion, and I soon have him sick and helpless on the top of the water, a fish to appearance about 10 lbs. Having no landing net or gaff, I cannot get him landed owing to the water plants, which cover

the water two yards from the bank. I send up to the farm, and the grieve comes down with a "muck-hack" to draw out the fish. I am doubtful if the implement is sufficient. Master Pike soon settles the question. As it is drawn gently over his back, he begins to kick and plunge, and the gut breaking, the fish slips off the "hack" into the slime and "glaur," and disappears. That was the last we saw of him.

Fishing below the Parritch Haugh one night when dark, I hooked two Perch on my trout flies, and after some difficulty succeeded in creeling one of them, the largest Perch I ever saw taken from the Earn. This is the only time that I remember catching a Perch with fly. I I have no doubt Perch would sometimes take the artificial fly, if it was allowed to sink a little below the surface.

A little further down, at the pool below "The Troughs," there are good-sized Perch, but the bottom here is full of paling wire and other etceteras brought down by the winter floods,

and is therefore not suitable for bait-fishing.

Shoals of small Perch, weighing about two ounces, may be seen up and down the river. Boys have no difficulty in securing a catch, armed with such rudimentary tackle as a bent pin attached to a bit of cord tied to the end of a stick. The fish get no time to gorge the bait, and there is no playing a hooked one. When a nibble is felt—whish! and out he comes, sometimes landing on *terra firma* a dozen of yards behind the youthful angler as the pin unbends and allows the fish to slide off. Fishing in this rude fashion, many of the fish are merely pricked, then they become shy, and move away from the spot, or treat the lure with contempt.

Fishing for Perch one afternoon, along with my wife, and casting far into the pool, I got one of fair size, and then they stopped taking. In lifting out the bait, a large Pike came after my coloured float, and, if I had allowed him, would probably have seized it. Catching a Par with fly, I soon had him on pike tackle; but

although I got Jack to come out of the dark recess and follow my bait, he made no effort to seize it. The water was low and very clear, and as I saw him I have no doubt he saw me, and was suspicious.

An old man used to come down at night, and with a herring tail for bait he would pick up a few Pike varying from 3 to 7 lbs., but he never got many. In the Library pool the gamekeeper shot one while lying basking in the sun on the top of the water; and a friend of mine, fishing with worm from the moored boat at the crossing when the water was in flood, hooked and "boated" a goodly five-pounder, which in his struggles to escape broke the gut cast and leaped out of the boat into the water, and was gone.

Neither Pike nor Perch are much fished for here. They are in such large numbers that they must be very prejudicial to the trout and salmon fishing, devouring much of the ova, and the Pike a lot of immature trout.

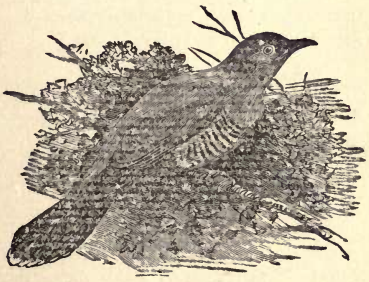
The Earn at this spot is very pretty. Looking

up towards Dornock Dam on a summer's afternoon, the banks richly clothed with bushes and trees in full foliage, and the water glistening and dancing in the sun, the scene is most enchanting. The continuous "kra-kra" of the Rooks at the Library floats down to us, and on the big stone in the Parritch Haugh the Water-Craw or Dipper is bobbing. Close to where we are now standing I saw a Kingfisher last autumn. To-day a little Wren hops about the willow bushes. There is music in the sound of the smith's hammer as it falls "rat-tat" on the "studdie." A pair of horses are standing at the smiddy door waiting to be shod. The sheep have gathered round the ash tree to shelter from the sun's hot rays, but the labourer in the hay field has no protection but his broad-brimmed straw hat. To work in this weather seems impossible. We are tired with our slight exertion, and are glad when home appears in view. On the banks by the road-side the Grasshoppers are chirping, the busy Bee flits from flower to flower, and the gaudy Butterflies

vie with the flowers in adorning the landscape.

"The Cuckoo calls aloud his wandering love"

from a tree at the foot of the park, and we can see a Kestril hovering over the broom on the look-out for mice as we pass into the cool shade of the house, and drop into a chair hot and tired.

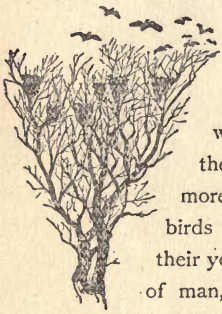


THE CUCKCO.

THE ROOK.

(Corvus Frugtlegus.)

"Sooth'd by the genial warmth, the cawing Rook
Anticipates the spring, selects her mate,
Haunts her tall nests, and with sedulous care
Repairs her wicker eyrie, tempest torn."



THE Rook, commonly called "the Craw," is a pawky, cunning bird of wary habits, not so wild as the Wood Pigeon, but is far more bold and venturesome. The birds build their nests and rear their young close to the habitation of man, who is at continual war with them on account of their thieving habits, and the ravages they commit amongst field

crops. He shoots their young every year as soon as they are able to leave the nest and sit on the branches. Despite all this, the Rook flourishes and thrives, and appears year by year to increase in numbers.

The good he does to the farmer during the greater part of the year is, I am afraid, forgotten when he digs up and eats potatoes, pulls up the newly-singled turnips, and makes toll on the first ripe grain. Rooks destroy a large number of injurious insects, grubs, &c., and if we for a moment consider the quantity devoured by them and other birds, we can realise the plight we would be in if all insect-eating birds were destroyed. It is questionable if we could exist owing to the increase of insect life; farmers' crops would be eaten up, and there would be a famine in the land. The balance, however, must be fairly adjusted. We are apt to forget this sometimes, and only think of what concerns us for the moment. What is it Burns says?—

"If self the wavering balance shake, it's rarely richt adjusted."

Sir John Gilmour, Bart., in his inquiry concerning the relation of certain birds to the agricultural interests, as shown by their diet (Highland and Agricultural Society's Transactions, 1896), calls the Rook a "thieving rogue," and says:—"I was, I confess, in hopes that our particular inquiries into the diet of the Rook would clearly prove that, if not over-abundant, he might to a considerable extent be a friend of the farmer. Judging from the results of this special investigation, as tabulated, I fear figures go badly against him. The result of the present investigation is to confirm me in the opinion I have long held that Rooks in the enormous quantities in which we have them in the County of Fife do an immense amount of damage; and I would urge those who have the control of rookeries to see that the numbers are kept within reasonable limits. The gizzards of the 336 Rooks (a certain number of which were shot every month of the year) examined contained, besides grain, many kinds of small ground Beetles (Geodophaga),

Wire-Worm Grubs, Daddy-Long-Legs (Tipula), Carabus Grubs, Miana Grubs, Hyladphasia Grubs, and Turnip Moth Grubs. The ground Beetles (Geodophaga) being of predatory habits, are considered beneficial to agriculture, and when destroying these—as is done on a fairly large scale—the Rooks must be regarded as acting in opposition to the interests of the farmer. While killing and taking grub, on the other hand, the birds may fairly be looked upon in the light of farmers' friends and benefactors." Against the insects and grubs Sir John squares accounts with the Rook with a long list of grain and potato food which the Rook steals from the fields, and upon which he principally lives. Sir John concludes:—"Taken altogether, the Rook has almost no claim to agricultural regard; his thievishness and rogueries look very black, for do we not catch him nineteen times at artificial foods and nine times more at cakes and such like, let alone his destruction of our crops when using them as food, or when hunting in them for his favourite

insects? There is, indeed, not very much to choose between the thieving Rook and gentle Dove."

It must, however, not be forgotten that the Rook gathers at least part of his foods on the road in the shape of spent grain in horses' excrement and also grain found amongst the dung carted to the fields, &c. That the birds sometimes steal and damage the grain in stacks built in the fields and insufficiently thatched, is too often seen to be doubted. But their stealing artificial foods from the troughs put down in the fields to feed sheep or cattle could surely be prevented at a little cost. Either the animals get more than they can eat or the attendant is careless in filling the troughs. By standing beside the animals a few moments he could see if they cleaned all up; if not, he could remove what was left. It is this, and what is spilt in filling the feeding troughs, that the Rooks eat. If it was not there they would not get it.

It is also possible to "fleg" the Rooks from

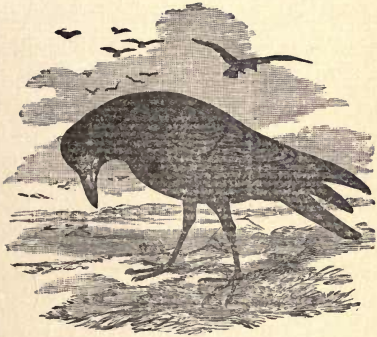
the growing crops at certain seasons at little expense. "Tattie doolies," or "bogles," are often tried, but not always successfully. Pieces of paper fastened to a string attached to sticks is a favourite "scare" with small cultivators, but the best "scare" is the gun. There are other devices which are equally effective, but illegal. It was said of a penurious farmer, whom I knew, that he once exchanged coats with a "bogle," thinking he had the best of the bargain, and he was known ever afterwards as Bogle B——.

The Rook appears to have the same character wherever found. Wilson, the American ornithologist, says that he is there hounded as a thief and plunderer; a kind of black-coated vagabond who hovers over the field of the industrious, fattening on their labours, and, by his voracity, often blasting their expectations. Hated as he is by the farmer, watched and persecuted by almost every bearer of a gun, who all triumph in his destruction, had not heaven bestowed on him intelligence and sagacity, far beyond what

is common in other birds, there is reason to believe that the whole tribe would long ago have ceased to exist.

The Rook, usually wary and careful, is, when pressed by hunger, most audacious, and will return again and again to a potato field when he gets a taste of the succulent tuber, and unless the "herd" is an early riser, the Rooks will have their morning meal before he is up. If much shot at, they will sometimes steal the potatoes and fly to an adjoining lea and there leisurely devour them.

I have seen and had acres of newly-singled turnips pulled up in quite a short time by Rooks, who pull the plants to get the Wire-Worm at the root. If the Wire-Worm were there the plant would be destroyed by it, so that the Rook is doing good in removing the worm; but there is not a worm at every plant, and the Rook does not discriminate, but takes each plant as he goes along, and he can do it very cleverly. In this way he soon does a great amount of damage. The cure then is worse than the disease. The



THE ROOK.

fact is, we in this district suffer from too much "Rook." I believe that on some large estates, such as Abercairny, they try to reduce the number of Rooks by kindling fires below the trees of the rookeries when the birds are sitting on eggs, and by firing guns and keeping the fires burning all night so alarm the Rooks that by the time they return the eggs are addled. Whether this mode of reduction is effective or not I do not know, but of late years there has been no diminution of numbers.

To all appearance the Rook is as black as the "Craw," but in early spring examine him closely and you will be surprised at his gorgeous plumage of a deep blue black, with purple, violet, and green reflections shining like burnished steel, which is ever flashing and changing in the sunshine, As he walks (for he does not hop like some other birds) in the bright sunlight, he, by his dress, might pass for a gentleman, only we know him to be a polished rogue. "Rooks," says Leigh Hunt,

"always appeared to me the clergymen amongst birds—grave, black-coated, sententious, with an eye to a snug sylvan abode and plenty of titles. Their clerkly character is now mixed up in my imagination with something of the lawyer."

It would be easy to write a long treatise on the Rook—his early rising, his silent morning flights, his gathering into flocks, and noisy return in the evening, &c., &c., but who with eyes open does not see all this, or can see it almost every day? also the building of their nests, the industry displayed in repairing the old biggin', the gathering of new material, the guarding of same when got, and the fights that ensue when "a stronger than he" tries to steal from his neighbour.

> "Those lofty elms and venerable oaks
> Invite the Rook, who, high amid the boughs,
> In early spring his airy city builds."

When the young are hatched the old birds assiduously attend to their wants, and at that

time they have usually no great difficulty in procuring worms and larvæ which the plough turns up, and which they "pouch" in the bag at the base of their bill, and carry to their young. They appear to trust the ploughman, for they follow close behind him with a "caw, caw," joined in the feast by Jackdaws and Sea-Maws—black-headed Gulls (*Larus Ridibundus*).

The Rook brings forth one brood in the year. After the young are able to fly they leave the rookery, the old ones continuing to feed them for some time afterwards; then all join in one flock, roosting at night on tall trees some distance from where the young were hatched. Here they make their winter quarters. In the autumn evenings thousands of Rooks and Jackdaws,

> "Rustling on the wing,
> From their wide plumes thick darkness fling,"

may be seen gathered together in a huge, straggling flock, and so numerous are they that in passing overhead a good half hour may be exhausted before the last pass—a continuous

stream many yards wide flying all the time, performing many evolutions in the air if there be a bit of a breeze; but this is best seen on a windy morning when they are going to their feeding grounds. In the evening, on their return, they are often very noisy—this is said to be a sign of rain—and will fly round and round above the trees on which they roost, chasing and playing with each other like children, who, when bed-time approaches, are most lively and disinclined to retire.

In a time of drought, or during hard frost and snow, the Rooks are at great straits to procure food, and have often to go long distances—sometimes to the sea-shore—to get as much as will sustain them. In the early morning they get worms that have come to the surface during the night when the dew falls, and they work early and late in the fields during the process of nidification.

The Rook is an adept at turning over clods to get the grubs that shelter beneath, and with

his powerful bill he very quickly digs out worms or potatoes that are near the surface. In dry weather, when their natural food is scarce, the birds devour eggs, and once they get a taste of egg, they will hunt and quarter the ground in search of more, like well-trained pointers hunting for game. They will also take young birds and chickens, pick out the eyes of disabled rabbits, and in general are not very particular what they eat.

They begin to build their nests in March, hence the saying—"The first o' March the Craws begin to search" (for sticks to build their nests). The young are, as a rule, "branchers" by the middle of May, the Queen's Birthday being a favourite day for the sport (?) of "Craw" shooting. The young are cooked—only the breasts being taken—made into pies; but to me they always taste bitter, and are not at all a likeable dish.

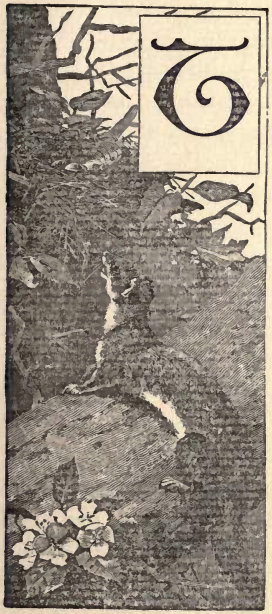
The usual cry of the Rook is "Caw, caw"; sometimes it is harder, as "cra," and when one

sounds the alarm on the approach of anything of a suspicious nature, it is more loud and harsh, as "khraa." On this note being sounded all rise and fly away.

> "Their danger well the wary plunderers know,
> And place a watch on some conspicuous bough."

The young birds are feathered on the fore part of the head, the base of the bill and nostrils being covered with narrow feathers; these gradually fall off, and leave them "barefaced" (in more ways than one) to the end of their lives.

VERMIN.



THE word "vermin" is used here in reference to the animals and birds noxious to the game-preserver, and not to members of the pulex family, a member of which one of my terriers is at present trying to remove from his neck with his hind foot.

On looking over the gamekeeper's pillory—a rail fixed to two trees adjoining the kennels, I could not help thinking that a few of the

specimens on exhibition might have been spared such a degradation without hurt to any one. That blood-thirsty, insatiable murderer, the Stoat, I would not defend, but there are such birds as the Sparrow-Hawk, and Kestrel, and the Tawny Owl—all here on view—that well might be spared. The Kestrel is a harmless bird so far as the game-preserver is concerned. He is a Mouse, Beetle, and Caterpillar feeder, although he may at times, when pressed by hunger, strike down a Partridge, or a wounded or ailing bird that he is able to overtake. The Kestrel, from the number of mice he destroys, is a true friend of the agriculturist. The Sparrow-Hawk, which exists in very limited numbers, is a more daring and powerful bird, and will seize with unerring aim and hold fast anything from a Sparrow to a Leveret. If plentiful, he is a robber to be feared in a game preserve; but his kind are so sparsely distributed—being shot down whenever seen—that they are likely to be exterminated.

I remember, many years ago, sitting alone on

the hillside one hot Sunday forenoon, seeing a Partridge come over the ridge flying at a great speed and uttering a cry of alarm, which drew my attention to it. Following close after was a Sparrow-Hawk, who quickly overtook the Partridge, and, striking him in mid-air, both came to the ground together in a field of clover about six hundred yards from where I sat. I ran down quickly to the spot, the Hawk only leaving his quarry when I was a few yards away. The Partridge I found dead with a wound in his head, from which blood was oozing. The Sparrow-Hawk is a fearless and daring bird when in pursuit of his prey, and has been known to dash through the glass of a dining-room window to get at the canary in the cage.

The wicked but dashing little Merlin we only see now at rare intervals—in the fall and spring of the year. Thirty years ago or more the bird was fairly common. Flying overhead at a swooping pace, I, making due allowance for speed and distance, fired at a Merlin, and,

breaking his wing, he uttered a piercing scream, and continued to scream until he reached *terra firma*, when he at once turned on his back, presented his claws, and with open beak was prepared to die game. Withdrawing the ram-rod—it was the days of the muzzle-loader—I offered him the end of it, which he promptly seized, and I thus carried him home. Although to appearance he was unhurt, except the broken wing, he must have been injured otherwise, for he was found dead next morning. Brave little fellow! I wish I had half his pluck.

The Tawny and all other Owls are indiscriminately shot by keepers. Why? They are, so far as game is concerned, harmless. They may pick up, when opportunity occurs, a young rabbit, but rats, mice, and moles are their chief food, and but for their blood-creeping "hoo-hoo-oo" on a dark night, when the keepers, touched with superstition, are watching, there is nothing to be charged against them. To see a pair of Tawny

Owls hunting the harvest fields when the stooks are on the ground, as the night waxes and the shadows fall, is a pretty sight. Out from the dark wood float, phantom-like, silent as the night, two fluffy balls. They appear much larger than they really are. They course the field over and over—their flight being noiseless, owing to the soft downy covering on the body and wings. Their prey gets no warning of their approach, and they do not know their unhappy fate until the claws are into their body. Owls are unerring in their attack, and their very long pointed talons are capable of inflicting very severe wounds, as I happen to know. I have had an Owl seize me by the hand, hissing all the time, and hold such a grip that I had to cry for help to get the claws pulled out of my flesh. They have such muscular power of contraction in their claws, which are curved and extremely sharp, that they are able to pierce leather.

As we retrace our steps homewards from the field, after it has got so dark that the pair of hunters cannot be seen, we are assailed all round by the cries of those sitting in the wood, and by placing our hands close together and mimicking their cry we get them to answer us. It is Tennyson who says:—

> "I would mock thy chant anew;
> But I cannot mimic it;
> Not a whit of thy tuwho,
> Thee to woo to thy tuwhit,
> Thee to woo to thy tuwhit,
> With a lengthened loud haloo,
> Tuwho, tuwhit, tuwhit, tuwho-o-o."

Owls can be kept as pets. Their food consists of mice, rats, small birds, or bits of butcher meat. I kept one for some time, but I could not say he was tame. He would ruffle his feathers at my approach and hiss at me, just as a wild one would do if you found him on his nest in the wood. If taken young and reared from the nest I believe they become very tame. In the fall of

the year one comes every night and sits on the top of the house, uttering his eldrich cries, which make the nervous and superstitious eerie, and to imagine our place is haunted and "no canny."

TAWNY OWL.

Magpies we rarely see now-a-days, and the one pilloried here must have been a wanderer. The Magpie has the reputation of being an inveterate egg-eater, and I have no doubt, when pressed by hunger, he would take a young Pheasant or Partridge. They certainly pick the eyes out

of the wounded and disabled rabbits; but for all these faults a few in a game preserve would do little harm. I know an estate where Magpies are fairly numerous and where game of all kinds swarm. The Jay we never see in this district —he apparently having been exterminated, which is a pity, as he is a pretty bird, and his jarring note is full of character; but he is an egg-destroyer and must go—all for the sake of the Pheasants.

The preservation of one species and the destruction of all others has surely reached its limit. The shooting of the Hawks has led to an enormous increase of the small grain-eating birds, which do considerable damage to the farmers' crops. The balance of nature has been broken, all for the sake of what is called game.

The Owls cannot digest the bones and fur of the animals they eat, but they have the power of ejecting such in the form of pellets. One who was at the trouble of examining these pellets found in them many wing cases of the

dark blue dung beetle, which shows the Owl likes a mixed diet. In order to ascertain the number of mice and other rodents destroyed by these useful birds, seven hundred and six pellets of the Barn Owl were carefully examined, and in them were found the remains of 16 bats, 3 rats, 293 voles or field mice, 159 shrews, and 22 small birds. From this may be seen the danger the farmer would run by the indiscriminate slaughter of these useful birds, which ought to be protected instead of destroyed. A few years ago Field Voles increased to such an extent in Eskdale that hundreds of acres of pasture were destroyed, causing great loss, and after various experiments had been tried without effect, continued protection of the Owls soon stopped the plague.

Hawks are now so rare here that the birds do not fear one when he does come our way. I had a Kestrel, attached to a chain and ring, placed amongst my berry bushes last year, and the Blackbirds and Thrushes used to fraternise

with him, and come hopping round, wondering who and what he was.

The next on the gamekeeper's list, and of which he had more than one specimen, was the common Cat, perhaps as destructive a poacher as can be found. Once the domesticated Cat takes to hunting in the woods, she ceases to be of any use for hunting mice or rats at home, and ought to be destroyed. One day while out ferreting the ferret bolted five Cats, —an old one, evidently the mother, and four half-grown, all of which I shot. The number of rabbits taken by these must have been enormous.

The Stoat and Weasel, notwithstanding constant trapping, hunting, and shooting, where and whenever seen, remain fairly plentiful. The Stoats pay a visit to my poultry-yard every year, and although I manage to secure the visitors, it is always after the damage is done. Stoats, like their smaller relatives the Weasels, are most destructive animals, killing, for the mere sake of killing, every animal on which they can

lay hold. They are not very difficult to trap, once you know their haunts—the roots of hedges, drains below roads, cairns of stones, &c.; and if a trap is set where they have killed chickens, the bodies being allowed to remain, you will have one of the culprits next morning, and if his body is hung up a short distance from the ground and traps set beneath, his or her mate will be got later on in the day or the night following. I have known this only once to fail, and it was last year when I shot a male Stoat that had taken refuge in the centre of a hedge where the terriers had hunted him. His body was hung up, and as more than one of the terriers had mouthed him, there was a fetid atmosphere around sufficient to draw anything for which it had attraction a mile away; but although the traps remained set for weeks, they remained unsprung.

Standing still, or concealing oneself, near to the Weasels' retreat, they may, on a warm sunny day, be made to show themselves by making

a cheeping noise with the mouth on the back of the hand. It requires a sharp, observant eye to detect them amongst the stones, and a quick shot to shoot them. I have repeatedly shot Weasels during the day by the roadside with a charge of Number 10 from a .410 bore. Children going to school often report seeing Weasels attacking young rabbits, the squealing of which call their attention to the attempted murder.

Weasels destroy a lot of mice, and so long as they do not invade the poultry or pigeon house, may be tolerated about a farm if rats are troublesome. The shepherds who appeared before the Vole Plague Committee were loud in their praise of the Whitteret (as they called the Weasel) as a vole destroyer, and declared that the little animal did a lot of good in their district by keeping down mice and voles.

But of all the vermin that trouble us there are none to approach the Brown Rat. Mice are fairly plentiful everywhere, yet they may be kept in

check; while, without poisoning, Rats are ever with us. They not only take eggs, but they kill and devour chickens and pigeons, and are very fond of ducklings, an old Rat soon clearing off a whole brood if he is not caught and destroyed. Having so many animals about we cannot use poison—in fact, I prohibit its use. A few years ago we were troubled with Mice in the parlour, and a favourite song-bird dying, and his body being "dissected," evidently by Mice which had climbed up the window curtains during the night, my wife resolved to try poison. To make sure that no other animal but those it was intended for should get it, the poison was placed in a saucer, and the saucer deposited in the bottom of the empty cage, which was hung about four feet from the ground. Next morning three dead Mice were found in the cage, and one on the floor. Just as the danger of the latter occurred to me, I saw the tail of a Mouse vanishing into one of the terrier's mouths. A salt emetic was at once administered, and the Mouse was vomited entire. That there was sufficient

poison in the Mouse to kill a Dog was doubtful, but the risk was great, so it was resolved that henceforth no poison was to be used. Traps and all other engines of destruction are employed to kill the Rats, shooting them on a summer evening being a favourite sport.

The Hooded Crow is not to be found in the gamekeeper's larder here, as he is rarely seen; and the croaking corbie wisely keeps to the mountain, where he can see about him, never venturing so low down. But why persecute and destroy the species mentioned, and allow the Rook and Jackdaw to go free? Beyond the few examples tied with strings to long sticks, and floating in the breeze amongst the pheasant coops, there are no Rooks or Daws in the pillory. Now, these two are the most inveterate robbers and thieves of all the feathered marauders—they will come close up to the door and steal eggs, carry off young chickens, fly off a short distance, decapitating and bolting them, and returning for more. The number of eggs destroyed by these feathered

banditti must be far in excess of that taken by all the other vermin which are to be found in a game preserve. They exist in such numbers that no exposed nest is safe, but, like the Rats, they, paradoxical as it may seem, appear to thrive and increase by the yearly killing process.

The Mole is not classed amongst the keeper's vermin, but the farmer classes him as such, he being the only animal of feræ nature that he has to pay a man to destroy. This is one of the evils of over game-preserving, and the killing of the Owls which feed on them. Although regularly trapped and destroyed in the cultivated fields, in the waste lands and woods they are allowed to multiply *ad libitum*, their natural enemies being shot. It is said by those disposed to see good in everything, that what the farmer calls a pest is really, to him, a useful animal—draining his land with his subterranean tunnels; but many of these "runs," if examined, will be found too near the surface and too level to do any good in that way; they

rather destroy the roots of the plants by raising up the soil, which dries so quickly that the plants wither and die. The Mole lives principally on worms, but, according to Darwin, the earthworm is beneficial to agriculture. No; I am afraid the good the Mole does to the farmer is not seen. His unsightly heaps are. You never find Moles in wet, undrained land, but where it is "fat" and full of worms. He is partial to land newly "worked," and to fields newly sown with grain, where he makes his "runs" freely in the loose, freshly-stirred earth, thereby, for reasons already stated, doing considerable damage. Talking to a farmer, and trying to defend the Mole, I said there was no doubt every animal served a useful purpose, although, perhaps, we could not see it. He promptly asked in his practical way—"What good purpose does the Mole serve by running up my 'neep' drills, leaving the earth 'boss' below the seed, and making me saw ower again? Tell me that."

EVENINGS ON THE EARN.

"Away frae the smoke and the smothers!
Away frae the crush o' the thrang!
That hae fettered our freedom sae lang;
For the May's i' fu' bloom i' the hedges,
An' the Laverock's aloft i' the blue,
An' the south wind sings low i' the sedges,
By haughs that are silvery wi' dew.
Up, angler, aff wi' each shackle!
Up, gad and gaff, an' awa!
Cry—Hurrah! for the canny 'red heckle,'
The heckle that tackled them a'."

—*T. Westwood.*

I HAVE read somewhere that the Earn is a "dour" river to fish, but I have not found it so—at least not more so than other rivers flowing through a low-lying, rich, agricultural district, where the trout run to a good size, are well fed, and wary. In the sum-

mer months, when the Earn is low and clear, it is difficult to entice trouts of any size to rise to the fly, as by that time they are fat and lazy, and surfeited with ground bait in the form of larvæ of various species of aquatic insects, that of the stone-fly predominating. In the quiet parts of the river—in the pools and ditches adjoining—may be seen bits of rotten-looking straw or decayed-looking bits of sticks moving in the water. These are multitudes of larvæ of different species and sizes, encrusted with various substances. They may be found adhering to stones and stumps, or crawling about the bottom of every pool in the vicinity of the river, like animated pieces of straw, the head and forelegs alone protruding from the orifices of their unique habitations.

A careful angler who knows the water and the lie of the fish may make a fair basket of trout on the hottest day in summer by fishing up stream with worm, using very fine tackle, and fishing in the shallow parts where the water

is broken by running over stones, beside overhanging banks, or any place where the fish can have the slightest cover. In the evening a nice dish of trout, weighing from half-a-pound upwards, may be secured with the natural minnow, but it requires skill to bring them to the hook, and a novice will not make much of it, for the trout at this time of year are well fed and shy, and take fright at their own shadow. When there is a slight rise of water the trout take the worm greedily, more especially after a time of drought, and when the water is not too high they will rise freely to the fly.

After the day's work, I have often wandered, rod in hand, down the banks of the Earn, not with the intention altogether of catching fish, but to breathe the river air, to enjoy the sylvan scene, to listen to the warbling of the birds, to watch the insects that frequent the water-side and the flowers that grow upon the banks; these to me are far more enjoyable than the mere catching of fish. "We are affected with delightful

sensations when we see the inanimate parts of the creation—the meadow, flowers, and fields in a flowering state. There must be (says Seed) some rooted melancholy at the heart, when all nature appears smiling about us, to hinder us from corresponding with the rest of the creation, and joining in the universal chorus of joy. But if meadows and trees in their cheerful verdure, if flowers in their bloom, and all the vegetable parts of the creation in their most advantageous dress, can inspire gladness in the heart and drive away all sadness and despair, to see the rational creation happy and flourishing, ought to give us a pleasure as much superior as the latter is to the former in the scale of beings."

In fishing, fly and natural minnow are the only lures I use. Here as elsewhere "fine and far off" is the secret of success. The tackle must be of the finest, and the line thrown so that it falls on the water like a gossamer thread without disturbing the surface in the least,

THE OLD BOAT INNERPEFFRAY.

else the trout are off at once to the deep water, as may be seen by the darting line of undulations which betoken their retreat before your flies.

"The minnow in summer its monsters will kill,
And the worm loads the pannier when nothing else will;
But give me the spring-time, the light-dropping tackle,
And the masterly cast with the finest of tackle."

On the west side of the Library pool, just below the Boat, is a favourite spot of mine. Here the bottom is gravel and sand, and just where the deep water ends and the shallow begins the trout lie feeding, making excursions on to the shallows as the orb of day departs behind the Grampians and the night shadows fall. This is the time that the big trouts leave their dark abodes to feast on the minnows and other small fish which they find on the shallows. Night fishing, to those who like it, is very exciting. When the water is low and clear, heavy fish are often got at night on the natural minnow, or with wasp grubs, or maggots scoured in oatmeal and bran. It requires good temper

and careful handling to fish at night. I cannot do it.

Further down the river, at the Parritch Haugh, there is another bank of gravel and sand, where the water leaves the pool. Here it is better to wade, as you can reach the lie of the trout better without being seen. The banks being high, the fish can see you a long way off, and some caution is required in approaching the pool. At this spot I have, again and again, landed fish of a pound weight, and at the end of the season the place is a very good lie for sea-trout. A little further on in the stream that runs into Linn o' Bain good fishing may be found, but the trout in it are most capricious, and on a likely day it may be drawn blank. Sometimes the persevering angler may be rewarded with a good catch, fish up to and over one pound being sometimes got; at other times not a fish can be moved. Linn o' Bain is more a salmon than a trout pool, being haunted by Pike and Perch; but at the tail of the pool

THE DIPPER.

there are always trout to be got. The stream out of this pool looks a likely spot for trout, but, with the exception of a sea-trout when the water was on the rise, I never made anything of it.

Where the Troughs—a natural channel cut out of the solid rock by the action of the water, and very deep in some parts—begin is a good place to fish. Here many a good fish, up to two pounds weight, have I got, and on fine tackle they require careful handling after they are hooked, and if they bear down, and the water is the least up, the chances are that the fish are lost. I can recall a memorable scene here. It was in October—the water in full spate, and full of fallen leaves. Salmon were plentiful in all the pools. Casting well over the Troughs, a long throw, my "Jock Scott" came swirling round, and a big red body rolled over, but the line did not tighten. A few minutes' rest and another throw. This time the hook is seized under the water, and soon the reel is screaming.

With rod erect I do my best to retard the progress of the fish, which to all appearance is a heavy one, but, despite my exertions, he maintains a steady pull, going to the opposite side, then moving up, all the time taking out line. At last he is stopped, and I gradually get him to move down water, recovering line with all speed. He has not shown himself yet, but by his tactics I know he is well hooked, and as my tackle is good, I put on a good strain, but am quite unable to hold or guide him. For thirty-five minutes the struggle goes on, giving and taking, and all this time no one has seen the fish. The two keepers have come to see the fish, and the Earl of S——, who was casting further up the stream, is also attracted to the scene. I am now getting exhausted; my arms are quite sore with the strain, and at the cry, "Give him the butt," I do so; but it was like trying to lift an ox; still, I persevered, and was pleased to find that I was gradually getting the upper hand, and moving him slowly to the

SALMON.

side. The bank here is steep, and covered with the stumps of the alder bushes that had recently been cut down. The keeper was ready with gaff. Putting on all the strain I could—for my powers of endurance and patience were about exhausted—I contrived to get him within reach of the gaff, when click went the reel—the strain was off, and the fish, getting into the trough, went down, down, down, my line playing out, and I unable to stop him. After the line was all run off, I held on until the line broke by chaffing on the rocks. The keepers made cursory remarks, and the Earl observed that it must have been a very heavy fish, which, of course, it was, for is it not the big fish that always get away? Desiring the Earl to take a cast where I knew the fish were lying, he declined; but on showing him that my reel (a line and planet) was useless, and that I could not fish any more, he took a few casts, and in a quarter of an hour after hooking landed a twenty-two pounds fresh-run fish.

Later on I began casting, more for amusement and to keep myself warm, and hooked another fish, but my reel having lost the catch, I could not hold him, and although the keeper took him in hand, the fish very quickly made "ducks and drakes" of the casting-line on the sharp rocks.

Below the Troughs the river broadens somewhat, and the water runs about twelve to eighteen inches deep over a rocky and stony bed. In summer you can easily wade all this part of the river, and trouts of a quarter-pound weight or more are fairly plentiful. Passing the Old Castle, we come to a wide and deep pool, surrounded on both sides with a belt of trees. Here there are some very heavy trout, but they can only be got by wading down stream as far as possible into the pool and then casting. It is very easy to go far here, and more than once I have gone until my waders were full of water. One thing in the angler's favour is that there is a good bottom. It requires very fine casting to rise fish in the smooth water here,

but the reward is often well worth the trouble. One afternoon I got a three-and-a-half pounds trout here, hooked by the tongue, and as I had to bring him up the water on fine tackle, it looked as if the fish would be the victor, as I had no landing net; but I eventually succeeded in safely landing him—a deep, well-made fish, with large spots. He cut up red and tasted delicious. The early spring fishing—March, April—is the best; after that the fish do not rise freely, and in the summer months the Par are very troublesome.

My favourite fly for this part of the Earn is a claret body with a blae wing, but any of the common river flies, such as red or black hackle and hare's lug, if not dressed on too large a hook, do well, as does the cinnamon fly. The yellow drake, although the natural fly on the water, does not take well. The March brown in spring is the favourite.

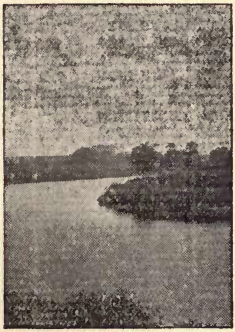
In the lower parts of the Earn the angler need not be afraid of being surfeited with an

over-abundance of small trout. On a good day his basket will show a great variety in size, and in quality also, when contents come to be cooked. The small trout, covered with oatmeal, or with bread crumbs and the yolk of an egg, and fried, are a most delicious dish. If the trout are large, they are better split down the back before frying.

In the summer evenings Mallard Ducks and young may be seen paddling about the sides of the river, that bit at the Old Castle being a favourite breeding ground, the Teals breeding in the tributaries. The Water Craw is never absent, flying up and down the river, uttering his discordant cries, or sitting bobbing on a stone. It is only at times the Kingfisher is to be seen; but along the banks the Water-Hen is never absent; and the Cutty Wren, the Willow and Wood Warblers may be heard lilting their sweet song; while the "chee, chee" of the Blue Tit on the higher trees lends variety to the pleasant noises. While resting on the bank waiting on

the sun going down, Cowley's lines often occur to me:—

> "Here let me, careless and unthoughtful lying,
> Hear the soft winds above me flying,
> With all the wanton boughs dispute,
> And the more tuneful birds to both replying
> Nor be myself too mute."



LINN O' BAIN.

AUTUMN.

. . . . "For him the hand
Of autumn tinges every fertile branch
With blooming gold and blushes like the morn;
Each passing hour sheds tribute from her wings,
And still new beauties meet his lonely walk,
And loves unfelt attract him."

—*Akenside.*

FTER August, when the song summer migrants have departed, and our resident songsters have gone into moult, the voices of the wood are still, unless it be an odd bird—a bachelor—who is singing all to himself. The Robin and Wren are still in the moult, and during July and August are mute; nevertheless there is much to interest the observing ornithologist.

The Swifts have gone, but the Swallows and Martins are still with us. The young birds are now to be seen in plenty, and it is of interest to note the difference in colour of plumage between the old and young. The young Starlings have not got the velvety, shining black with the purple reflections that constitute the plumage of the old birds. Before the young moult their nest feathers, which takes place in the autumn, their plumage is a dirty brownish black colour, and they have sometimes a little white on the throat and belly. Some of the old naturalists thought the young Starling was a Thrush, and described it under the name of the Solitary Thrush; and as they left specimens from which they formed an opinion, there is no doubt that they were in error. From the name given—Solitary Thrush—it may be assumed that they were not practical ornithologists, and knew little of the habits of these birds, as young Starlings are anything but solitary, living together in large flocks during the autumn and winter and until

pairing time in spring. They may often be seen accompanying a flock of Rooks and Jackdaws. When the young birds are half moulted they have a curious patchy appearance, which is caused by the new black feathers appearing amongst the brown nesting feathers. It is only after the Starling is two years old that he acquires the fine yellow beak and gorgeous spotted plumage we all admire.

The young of the Wild Pigeon do not have the white neck feathers, which give the name "Ring-Dove" to the species. They only acquire these after they moult.

Herons are three years old before they get the elongated crest, or the long, finely-spangled feathers at the base of the neck in front, without which the bird looks plain and unfinished. The young may also be known by the brown tinge on the grey plumage of the back.

The young of the Blackbirds resemble somewhat the mature female in colour of plumage, the upper parts being a blackish brown, and the

under parts a dirty orange brown, with dark spots on the ends of the feathers. These spots are generally more clearly defined on the young males. The young of the Robins before the moult have no resemblance to our familiar red-breast. The feathers of the upper part are tipped with brown, the breast is of a lighter tinge, the feathers being spotted with dark brown. The plumage is open and fluffy, and not so tight as on old birds.

It may be said, as a general observation, that when the old birds differ in colouring the young birds of both sexes take after the female in shade of plumage in their primary nest feathers, which they retain until their first autumnal moult. After moult the difference in colour of plumage will indicate the sex. In some species it is often difficult to distinguish the male from the female, the Goldfinch being a good example of this.

Old Jackdaws may be distinguished from the young by their silvery-grey hood, the young

birds of the year having very little grey—in fact, it is two or three years before the grey neck is fully developed. The young Swallows do not have the long forked tail feathers of their parents, nor the dull red covering on the forehead. These and other differences in plumage the young naturalist may note.

Autumn is the season of decay and rest. The earth has yielded her fruits, and man is busy storing them up for his future use. The days of hand-reaping are past. The reaper-and-binder is busy among the yellow grain, instead of the band of Irish shearers, or their successors of a later period, who wielded the scythe in place of the hook. A great concourse of men, women, and children appeared, until recently, on the harvest field, the men swinging the scythe, the women lifting the cut grain and binding it into sheaves, while the children made the bands, those too young to work being left at the stook-side to play, while the older children were at work. They were a gay, merry band, each glowing cheek showing

ruddy health. Now, instead of this animated picture, there is one machine drawn by two or three horses, which cuts the grain and binds it into sheaves, one man driving the horses, and two going behind setting up the sheaves into stooks. Quietness reigns. The loud, hearty laugh and often rude jest, the evolutions of the young as they chased each other during resting(?) time at "mid-yokin," are all but faint impressions. If I might be allowed to parody a verse from that beautiful song, "Far Away," I would sing:—

Where is now the merry party
I remember long ago,
Chasing round the harvest field,
Under mid-day's ruddy glow?

The whirr of the reaping-machine, or the crack of the sportsman's gun, only makes the quietness more pronounced. We miss the lively little Chiff-Chaff, whose voice grew stronger as the days got warmer. He is now far away, but he will return next spring. All birds are silent.

"All silent the song of the Thrush,
Bewilder'd she cowers in the dale;
The Blackbird sits long on the bush,
The fall of the leaf they bewail."

All birds sing from love and joy, and to charm their mates, having no beauty of plumage to fascinate the eye; for it may be observed that all our songsters are clothed in sombre colours, while those of a showy plumage have little song. Birds sing best during the breeding season—the season of love. At other times we may have a bright, happy song from excess of spirits and general good health, the same as animates the plough-boy who whistles as he drives into the stackyard the golden grain.

As the season advances, as the nights lengthen, the Swallows and Martins begin to gather into flocks on the house-tops, and on telegraph wires that run along the railway bank, previous to their departure for Africa's shore.

The quiet, subdued autumn colours—gently merging into crimson, scarlet, purple, yellow, and all the shades of fawn—now take a

deeper tint, every day revealing change of hue — a russet brown that tells of decay creeping over all, and when the first touch of frost comes the leaves tremble and shake, and, parting from the branches, fall fluttering to the ground—those of the chestnut, ash, and plane tree being the first to go.

> "The flush of the landscape is o'er,
> The brown leaves are shed on the way;
> The dye of the lone mountain flower
> Grows wan and betokens decay."

In the gloamin' the rays of the departing sun linger on the western sky—a conflagration of colours, the sun glowing like molten metal. Can there be anything grander than the fiery splendour of an autumnal sunset? The shadows of the trees lengthen with the declining sun, and the "haar" begins to creep up from the valley, shutting out the river and the whole of the low-lying ground. The Partridges are calling to each other from the stubbles on the other side of the hedge, and the Wood Owl has begun to hoot. As the shadows of night deepen, no sound is

heard but the "baying" of a Collie in the distance.

As the season advances, when autumn wanes to winter, and the trees are stripped of their foliage, when "those bare, ruined choirs, where late the sweet birds sang," and when the wind moans through the leafless woods, snapping off the dead branches, the Wild Pigeons visit the turnip fields in countless flocks to feed on the green tops. Their feast of blaeberries, acorns, and beech-mast is past, and now that the winter is upon us they will find it more difficult to procure food.

Golden Plovers in little family parties are moving about; they breed on the hills, and come down to us in the autumn before they go into flocks and migrate to the sea-shore. We know them by the shrill whistle they emit when flying past. The Wild Ducks may now be seen in the evenings flying inward to feed, and the Canadian Geese that go between the lochs or ponds at Drummond Castle and Abercairny may be observed feeding on the stubbles.

The Great and Blue Tits are now drawing

near the house, and the Shufflewing (hedge accentor) in his new coat is flitting in and out of the hedge; while winter's favourite, the Robin Redbreast, in his new dress, comes hopping on the scene, quite proud of himself as he chants his sweet, eloquent song. There is no bird that I like so well to hear sing as the Robin. There is a tender pathos—perhaps more evident at this season, when other birds are silent—and a sweetness and variety that you do not find in any other bird. At this season—the fringe of winter—he appears to pour out his song in the exuberance of high spirits and happiness.

> "Thy friendly heart, thy nature mild,
> Thy weakness and docility,
> Creep to the love of man and child,
> And win thine own felicity."

The Wren, another winter singer, is different in habit, flitting in an out of the bushes on the bank, and not coming so near our abode as the Robin. He is a sweet singer, and

> "When icicles hang dripping from the rock,
> Pipes his perennial lay."

Frost and snow now cover the ground, and in the wood the feet sink into the soaked masses of decayed leaves. In a long-continued frost many birds must perish from want of food. Their bodies being well protected by a covering of feathers, birds are able to withstand the effects of very severe cold. Morris in the second edition of his work on British Birds cites a local case of a Wood Pigeon found frozen to the branch of a tree. Here is the paragraph :— "A circumstance, perhaps unprecedented in the annals of freezing, was discovered here last week. A person found in this neighbourhood (Crieff) a Wild Pigeon literally frozen to the branch of a tree, and so intense was the freeze, that the individual cut the branch, and carried the Pigeon home in that state alive."—*(Scottish Paper, Feb. 13th, 1838.)* And the Rev. Alexander Stewart, in his charming book, "Nether Lochaber," has the following :—"On Friday afternoon we had occasion to go to look if our boat on the beach was all right, for the darkening heavens

threatened an immediate storm—a not uncommon end to such a rare meteorological phenomena as long-continued frost on the West Coast. Sitting on the end of a log of wood that lay on the beach a little above high water-mark was a Rook or Crow, which, as we approached, attempted to fly away, but could not. It stretched itself, and strained and flapped its wings frantically as we drew near; but there it was, tethered firm and fast, manifestly unable to budge an inch unless it carried the immense log bodily along with it. We wondered for a moment what in the world was the matter, for we could not remember ever seeing a Rook, of all birds the most knowing, perhaps, and self-possessed, act so absurdly. Running forward and laying hold of the bird, we had a ready solution of the mystery in the fact that the poor struggling creature's feet were firmly frozen to the log, more firmly than the best bird-lime or glue could have held them." That was in January, 1875, a winter of unmitigated severity, when many

birds, such as Thrushes, Blackbirds, Chaffinches, Rooks, and Hedge Sparrows died from want of food.

When birds go to sleep with their beaks buried amongst the feathers on the top of the wing or shoulder (a bird does not sleep with its head under its wing) they are well protected from cold so far as their bodies are concerned, but how their feet escape frost-bite is to me a mystery. We believe very few birds die from cold alone. It is the want of food that kills them. So long as they can procure food they will live through the severest winter. Thrushes always fare badly in a long-continued frost; but Woodcocks and Snipe are always fat when killed during a storm, showing that they procure plenty of food at that time—probably at the various springs which do not freeze.

The instinct of birds is keen. Long before we can see any signs of a thaw the Wild Fowl, that have taken to the estuary during severe frost, grow restless, and when the first breath of a

south-west wind is felt, they are off inland to feed on the fresh-water loch, from which they were driven by the frost. They seem to know instinctively that there is to be a thaw. While a thaw, after a long-continued frost, is a happy change to the birds, and even to healthy man, who delights in the "roaring game," the weak and infirm often think otherwise. In a thaw there is a raw, cold, penetrating atmosphere. The woods are cold and bare; the mist condenses on the boughs, from which there is a continued drip; and when a wind shakes the branches, a shower of heavy, slushy, icy drops descend, and it is only the robust and strong that do not feel the change harmful.

During frosty weather the bird-catcher with his cages of call-birds and limed twig visits the whinny knowes and the banks and braes that lie to the sun. In this way many thousands of our song-birds are destroyed, for very few of the males caught ever get reconciled to cage life, and the hens, being of no value, are ruthlessly killed. In

the bird markets of many of our large towns Red Linnets and other birds may be bought for one penny each. In England every autumn and winter many thousands of Wheatears and Larks are caught in nets, killed, and sold for food; yet we bewail the decrease of our smaller song-birds, and while protecting them by Act of Parliament during the breeding season, allow them to be destroyed wholesale in winter.

During severe frost the swimmers—Ducks, &c.—do not suffer in the same way, as they migrate to the mouths of rivers or estuaries, or to the open sea, where they can always find food. There they remain until a thaw comes.

THE TIT.

BLUE TIT.

THE small, beautifully coloured, and peaceful birds which we know as Tits are a very interesting family. There are in all seven varieties of Tits, but only four are resident with us—viz., the Great Tit or Oxeye, the Blue Tit, Coal Tit, and Long-Tailed Tit, the latter rather rare. The first three are abundant, but the Coal Tit, keeping more to the woods than the Oxeye and Blue Tit, is not so well known.

Their small size, graceful movements, and acrobatic antics attract the attention of all interested in bird life, and Macgillivray was of the opinion that the Tits were closely allied to the Jays. This species (Oxeye), being the largest, exhibits the relationship in a more remarkable degree than the rest, not only in form, but also in manners. Thus it is in a manner omnivorous, for, not content with seeds, insects, larvæ, it eats the flesh of birds or quadrupeds, and, according to many reputable writers, sometimes attacks small or young birds. I have never seen this. I know the Tits are not deficient in pluck, and will stand up for their rights, and fight in defence of their nest and young; but I have never seen them attack a weak brother. They are so busy all day that they have no time to quarrel and fight. They are very fond of a bone to pick, or a bit of suet, and in hard frost will relish any tit-bit of meat put out to them.

The approach of winter drives the Oxeye

and Blue Tit, and also the Coal Tit, from the wood to the cornyard, garden, and steading. In the early spring the Oxeye and the Blue Tit may be seen in the orchard and garden hunting for insects on the fruit trees. These birds are charged with destroying the buds, but that is not out of mischief, but to get the larvæ or insect lurking therein. In this they are doing good work, but gardeners don't see it. Mudie, in the "Feathered Tribes of the British Islands," referring to this, says:—"The larvæ of these lurking moths not only do mischief themselves, but are the cause of mischief being done by others. The injury which they do to the young buds, in the very cores of which they fatten, gradually brings on that languid action in the tree, in consequence of which the influence of the sun, that in healthy plants would bring out a rich and luxuriant foliage, induces a saccharine condition of the sap which fosters the congregating caterpillars, so that they appear upon the trees in swarms, secure during the day in their silken

tents, but eating voraciously at night till not a particle of green is left; so that if the tree does not perish, it remains actionless for the year. Nor is the mischief confined to the leaves, for without their action the sap does not change into a healthy cambium, fit for producing the new layers of wood and bark, the constant accompaniments of life and vigour. The whole active surface of a back-going tree thus becomes saccharine, and is infested with swarms of insects of different kinds down to the very roots; and in the course of the summer the bole and branches become full of canker; half the top dies, branch after branch, and the miserable remnant of the once fruitful and ornamental tree becomes equally unproductive and unsightly. When a tree is thus attacked its recovery is always doubtful and generally hopeless. Wood and bark that have stood more than one winter are much less fit for vegetable action, even though they have received no direct injury, than when they have only showed one. But in a tree which has

been injured, as above described, the continuity of even the stiffened vessels is broken, and the new production even, if the tree lives, is wasted in unsightly gnarls and knobs, which afford further shelter and protection to insects, and form lodgments for water, which stagnates and rots the wood. Bending down and grafting is generally only loss of time and labour, and the diseased part remains to inoculate other trees." I have quoted this to show the valuable services the Tits render by clearing the buds, as the Rooks and Starlings do the fields, of harmful insects.

The Tits in their search for food on the trees exhibit a restless activity. Never for a moment at ease, they fling themselves into every conceivable position, now hanging sideways to a branch, anon under it back downwards, round and round, then off to another branch, where the same gymnastics are repeated. It appears all the same to them whether their heads or heels are uppermost, as they flit from branch to branch,

and tree to tree, their "cheep, chee, chee, cee," or cry, "chur-r," being continually uttered.

The Great Tit and Blue Tit in winter come nearer to houses than do the others, although the Cole Tit is no stranger. None of them are shy in their habits. They nest in the holes of trees, or in wall crevices, and sometimes in old disused pumps. I remember, when a boy, taking to pieces an old pump to get a Blue Tit's nest. The owner of the pump came upon me before I had time to replace the spout, handle, &c., and, not being an ornithologist, considered my action one of pure mischief, and treated me accordingly. The nest of the Blue Tit has been repeatedly found in wooden letter-boxes attached to a fence or tree, but any article that will provide concealment, and has a small opening, may provide a resting-place for this curious little bird. They have been known to build a nest and bring forth their young in an empty ale bottle, the neck of which was only one inch in diameter.

The Long-Tailed Tits keep more to the woods, and may be found in companies. This most diminutive bird with its soft fluffy plumage is clearly marked out from the other Tits by its very long tail. They are quite as restless as their larger brethren, and may be found in dense thickets during summer and in families on the higher trees during winter. On cold nights they crowd together on a branch, evidently for the sake of warmth, as also do the young Wrens.

The Tits are members of a family, the genus *Parus*, and all possess distinctive characteristics. They are partly migratory, appearing at times more numerous in winter than in summer, caused probably by the absence or presence of food. They get the credit of destroying Bees, and in illustration of this I may quote an observer's remarks that appeared in the *Zoologist* in 1876:—"These birds have long been known to frequent the bee-hives to get the Bees; it is during the winter and early spring that they do so. I am not quite certain that they take

the hive Bees, though they are always accused of so doing. I fancy the dead Bees, which are so often at the mouths of the hives at this season of the year, first attract them; and when they have got all they can reach, I have known them to peck a large hole into an old straw hive to try to get more. Perhaps this disturbance at the hive brings some of the half torpid Bees out to see what is the matter, and *Parus Major* (Oxeye) likely enough improves the occasion by devouring them. This Tit seems more insectivorous than *Parus Cœruleus* (Blue Tit), which does not, so far as I have seen after many years' observation, indulge in this habit."

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